

# **Quonset Davisville Port and Commerce Park Master Plan**

**2003 Revision of 2001 Update**



**December 2003**

**Prepared for:**

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## Executive Summary

The purpose of this Master Plan is to guide the Rhode Island Economic Development Corporation (RIEDC) and Quonset Davisville Management Corporation (QDMC) in continuing development of a 3,047-acre site in North Kingstown into the Quonset Davisville Port and Commerce Park (the Park.) The Park is generally bordered on the west by the Northeast Railroad Corridor, on the east by Narragansett Bay, on the north by Newcomb Road and the Mountview neighborhood and on the south by Camp Avenue and the Shore Acres neighborhood. The Master Plan is a general and long-range guide to accommodate mixed uses, emphasizing commercial industrial development, and the use of multiple transportation facilities during the next 20 years at the site. The overall intent of the Master Plan is to optimize the assets at the site to achieve quality, create jobs and provide for environmentally compatible development.

The Master Plan is developed to achieve the primary objective of the RIEDC, which is to continue to develop a world class multi-modal industrial park at Quonset Davisville and provide jobs and other economic benefits to the residents of Rhode Island. The plan encompasses the entire Park including developed, available, vacant, and developable land. The development program is based on a detailed market analysis. The plan accommodates growth by existing industries and provides for expansion of roadway, rail, and utility services in a compatible network that supports a first class industrial park. In addition, it assumes continued growth of flight operations at the Airport, considered a considerable asset for future development of the Park.

### 2003 Master Plan Revision

Throughout his campaign, Governor Donald L. Carcieri opposed a container port facility at the Park and upon his election, halted all efforts into its assessment, thereby initiating a revision to the 2001 Master Plan. In the 2003 Master Plan, all references to a container port and intermodal facility, a term associated with a container port, were removed. RIEDC also took this revision as an opportunity to work with the Town of North Kingstown to revisit concerns raised during the 2001 update that were not fully resolved. These concerns related to the definitions of land uses, water conservation, public access, and buffering between Park activities and adjacent residential neighborhoods. Coming to a consensus on these issues was the major focus of the revision process. Additionally, revised goals and objectives of the Master Plan integrated those of the Town outlined in their Comprehensive Plan. Given the resolution of these concerns, the RIEDC has encouraged the Town to take the steps necessary to adopt this 2003 Master Plan revision as part of the Comprehensive Plan.

### Jobs

The 2003 Master Plan revision accommodates future private investments in industrial and commercial land development that could generate 18,200 jobs at the site over the next 20 years. This total includes over 6,000 existing employees and nearly 12,000 additional employees on the vacant and developable land.

### Districts

The 2003 revision reaffirms the industrial and commercial districts outlined in the 1998 Draft Master Plan. The districts are West Davisville, Executive Park, North Davisville, Davisville Waterfront, Commerce Park, Kiefer Park, Quonset, and Quonset Waterfront.

## **Land Use**

Proposed land uses on the 678 acres of available and developable land include manufacturing industries, office and research and development facilities, and retail and services. Approximately 800 acres are already developed or partially developed for manufacturing and distribution uses, primarily. Open space, transportation facilities including the Airport, utilities, and recreation occupy the remainder of the 3,047-acre site.

## **Traffic**

The proposed full build-out of the site in 20 years will generate over 46,000 vehicular trips a day (ADT, average daily traffic). Traffic will be evenly distributed on Davisville Road and Roger Williams Way. Much more traffic uses the latter today because Quonset is nearly built out and Davisville is virtually undeveloped; therefore, most of the new development will take place in Davisville. Additional traffic will use the West Davisville Road Interchange at Relocated Route 403. The Park's traffic projections are consistent with the design capacity of the Route 403 Project because of the unusually long duration of peak traffic periods verified by current traffic counts, approximately three hours.

## **Circulation**

The Master Plan recommendations are fully dependent upon completion of the relocation Route 403 project now under construction by the RI Department of Transportation. This is because current access to the Park is inadequate; access is by a curving two-lane road through residential areas between Route 4 and the Park entrance at Route 1. The first phase segment between the Park and the Northeast Railroad Corridor is scheduled for completion by 2006.

A three level hierarchy of roadways is proposed within the Park; major and collector roads and local streets. The major roads function as arterials that provide circulation to, from and within the site. The collector roads move traffic between the major roads and local streets. The local streets provide access to the site's property owners and tenants. A new roadway called Cross Park Road will connect the separated Davisville and Quonset portions for the first time ever through the center of the site. Two grade-separated intersections to separate vehicular and railroad traffic are proposed on Davisville Road, at Cross Park Road and at the Route 403 Interchange. A system of bikeways, walkways, a water ferry facility and shuttle bus routes is proposed to encourage alternative modes of travel.

## **Transportation Demand Management and Transit**

Several methods are recommended to reduce single occupancy vehicle commuting to the Park. Most all commuters travel by automobile to the Park. Over half of the employees live in the North Kingstown-Providence corridor. Commuter vans offer the best possibility to service the widely dispersed development in the Park. In the future, as employment increases, commuter rail service to West Davisville and Rhode Island Public Transit Authority (RIPTA) bus service into the Park are recommended. Two new RIPTA bus routes were initiated in 2000 and scheduled to service work shifts at Electric Boat, but they failed to attract riders. The route from Providence was cancelled but the route from Newport remains active.

The RIEDC's proposed land use controls are intended to encourage transit-friendly site development that will locate bus stops and other shuttle services at the front doors of major employers. Perimeter and internal bikeways and sidewalks will further encourage workers to use alternative means to

commute to jobs. A Transportation Management Association (TMA) should be established at Quonset Davisville to sponsor commuter transit services for businesses in the Park.

One passenger transit center is proposed at the entrance to the Park near Route 1 and the Route 403 interchange in Executive Park. This center will provide a facility for RIPTA buses, privately sponsored commuter vans, internal Park shuttle buses, bicycles, and parking. The most effective transit service likely to be provided is privately sponsored commuter van service by resident companies.

## **Railroad**

The railroad facilities play an important role in daily operations at Quonset Davisville. Rail infrastructure is a key factor in the site's multiple transportation attractiveness and is an important element in the overall economic health and vitality of the Quonset Davisville industrial area. Major railroad track improvements are recommended.

## **Airport**

This Master Plan reaffirms the continued importance of the airport to the National Guard units based there and its benefits to the industrial park. There is also growth potential for aviation-related industries and corporate aircraft use. Such aviation industries include small aircraft manufacturing and repair and maintenance operations.

## **Market**

Market analysis findings include the following:

- The land development program has sufficient flexibility to accommodate a wide variety of industrial and offices uses at Quonset Davisville with different site requirements.
- The site's ability to accommodate rail-oriented users will be a major competitive advantage in attracting industrial and distribution firms, since few quality parks in Rhode Island and southeastern Massachusetts provide rail access.
- The inclusion of facilities such a hotel, restaurant, day-care and health services will enhance the competitive position of the site.
- At present, Quonset Davisville is at a competitive disadvantage in the market, primarily due to inadequate highway access from Route 4.
- The site's competitive position will begin to improve when off-site rail improvements are nearing completion, off-site highway connector improvements are completed, and on-site infrastructure improvements are underway.

## **Infrastructure**

Water supply and wastewater treatment capacities at the Park are adequate for full build out as projected. The development of the industrial park may reduce the stormwater flow volumes and intensities due to the conversion of previously impervious surfaces to open spaces and grassy swales as a result of the new development program. However, the size of the converted areas has been calculated. Privately provided electricity, gas and fiber optic cable services are available, the latter in Kiefer Park; Commerce Park is next. Quonset Davisville was recently equipped with state of the art broadband capability to service new technology industries. An underground utility corridor system along the major and collector roads is proposed.

## **Implementation Program**

The 2003 Revision to the Master Plan includes an Implementation Program based on the issues outlined in the 2001 update. The program provides for a market-based development program, a marketing program, land use controls and environmental review, and a capital improvement program. Specifically new to this revision is the proposal of a Quonset Davisville Overlay District to be adopted by the Town of North Kingstown into their zoning ordinances, allowing RIEDC and the Town the ability to meet the unique growth and development issues of the Park. Additionally, the capital improvement program includes specific items for roadway, railroad, utilities, and associated site facility infrastructure development such as building demolition, construction of new internal roadways, reconstruction of existing roadways, utility service improvements and extensions, internal rail upgrades, and bike paths.

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## 1.0 Introduction and Background

The purpose of this Master Plan is to guide the Rhode Island Economic Development Corporation (RIEDC) and Quonset Davisville Management Corporation (QDMC) in continuing development of a 3,000-acre site in North Kingstown into the Quonset Davisville Port and Commerce Park (the Park.) The Park is generally bordered on the west by the Northeast Railroad Corridor, on the east by Narragansett Bay, on the north by Newcomb Road and the Mountview neighborhood and on the south by the Shore Acres neighborhood and Camp Avenue. The Master Plan is a general and long-range guide to accommodate mixed uses, emphasizing industrial development and use of multiple transportation facilities during the next 20 years at the site. The overall intent of the Master Plan is to optimize the assets at the site to achieve quality, create jobs and provide for environmentally compatible development.

Governor Donald L. Carcieri's opposition to a container port facility at the park initiated this revision to the Master Plan. In the 2003 Master Plan, all references to a container port and intermodal facility, which was associated with a container facility, were removed. RIEDC also took this revision as an opportunity to work with the Town of North Kingstown to revisit concerns raised during the 2001 revision that were not fully resolved. These concerns related to the definitions of land uses, water conservation, public access to historic, cultural and natural features, and buffering between Park activities and adjacent residential neighborhoods. Coming to a consensus on these issues was the major focus of the revision process. Additionally, revised goals and objectives of the Master Plan integrated those of the Town outlined in their Comprehensive Plan. Given the resolution of these concerns, the RIEDC has encouraged the Town to take the steps necessary to adopt this 2003 Master Plan revision as part of the Comprehensive Plan.

As background, the initial Master Plan for the Park was completed in December 1997 and was very detailed and included a 20-year Capital Improvement Program as part of the Implementation Program. The document was revised in November 1998 to include responses to comments received from three additional public meetings held in 1998. In addition, it included updated information regarding water supply capacity. The 1998 Draft Master Plan was accepted but not officially adopted by RIEDC.

The 2001 Master Plan update addressed comments received from public agencies, affected towns, Board members and the general public received that year. These comments were generated by two Public Hearings in May and September 2001, availability of the Master Plan documents and maps in public libraries and on the RIEDC website in August and September 2001 and meetings with State agencies, the Town of North Kingstown, Board workshops, letters and emails. The intent of the 2001 Master Plan document was that both the QDMC and RIEDC officially adopt it as an official policy guide for the development of the Park.

### 1.1 RIEDC Objectives for Quonset Davisville

The 1998 Draft Master Plan for Quonset Davisville Port and Commerce Park was based on implementing RIEDC's 1996 objectives for the site. These included the preparation of a master plan that is realistic, financially feasible, and consistent with prior planning at the site. The 2001 Master Plan update identified implementation of the following objectives:

- Develop a world class multi-modal, industrial and commercial park.
- Provide jobs and increase State revenues.

- Unite two former US Navy facilities into a single harmonious entity.
- Accommodate a mix of uses, including open space and recreation.
- Maximize use of land resources in response to market conditions.
- Formulate a development plan that is realistic and financially feasible.
- Develop the site in a sensitive manner with respect to the environment and the Town of North Kingstown.
- Develop a plan consistent with the State Guide Plan, the Town's Comprehensive Plan and the Comprehensive Reuse Plan, Davisville Naval Construction Battalion Center.

In the 2003 Master Plan revision, RIEDC wanted to integrate goals and objectives of the Town of North Kingstown. The basis of the overarching goals and objectives for the park is to stress and strengthen the strategic guiding principles of the RIEDC Board of Directors and the QDMC, meet the concerns of all involved parties including the Town, and ensure that the development of the park is carried out in a responsible and sustainable manner. Goals and objectives were developed based on RIEDC objectives outlined in the 2001 Master Plan update and the Quonset Point/Davisville Element of the North Kingstown Comprehensive Plan.

- *Develop a world class multi-modal, industrial and commerce park.*
  - Provide jobs and increase State and Local revenues.
  - Optimize and enhance the use of vacant, developable land for industrial and commercial uses.
  - Maximize the use of the park's four transportation modes, roadways, rail, airport, and seaport, for both people and freight.
  - Unite two former US Navy facilities into a single harmonious entity by developing the park through a holistic approach.
  - Ensure that economic development is environmentally compatible through local zoning performance standards and a site selection and land development review process.
- *Develop the park in a manner that balances industry, technology, cultural and historic resources, tourism, and open space preservation*
  - Encourage land use activities that are of a diversified type, scale, and intensity consistent with the character of the Town of North Kingstown.
  - Accommodate a mix of uses, including open space and recreation.
  - Maximize the use of land resources in response to market conditions.
  - Protect and preserve open spaces, recreational opportunities, and historic and archaeological resources within the park that may be impacted by park activities.
  - Develop the park in a manner that fosters positive environmental growth and enhances socio-economic benefits.
- *Develop the park in a manner that enhances the local community and produces minimal on- or off-site impacts.*
  - Ensure the use of noise barriers and vibration controls as mitigation measure, where necessary.
  - Use buffering and other techniques to protect neighborhoods from activities in the park and ensure their maintenance.
- *Support initiatives that provide for adequate movement of park-generated traffic through the Town of North Kingstown.*

- Promote the expansion of rail use to conserve energy, reduce roadway congestion, and minimize damage caused by heavy traffic to roads and bridges.
- Encourage the utilization of traffic-demand management strategies.
- Discourage the use of local roads by park users and employees.
- Encourage the development of commuter transportation opportunities.
- *Continue a cooperative relationship between the State and the Town of North Kingstown.*
  - Integrate activities within the park with the surrounding community.
  - Partner with the Town to develop appropriate public services needed for the park and ensure the sustainable use of common resources.
  - Partner with the Town on the development of appropriate zoning and development standards.
- *Recognize the economic importance of the waterfront resource and encourage diverse coastal uses to serve commercial, recreational, and marine-related business needs.*
  - Allow development and expansion of marine-related industries compatible with nearby land uses.
  - Recognize the link between water resources to the tourism industry and encourage development of facilities and services that will enhance tourism without minimizing the environmental and scenic quality of the waterfront.
  - Ensure that waterfront development is consistent with the water quality standards of Narragansett Bay and waters along the park's coastline.
- *Minimize the impacts of Quonset State Airport*
  - Encourage appropriately scaled enhancements at the airport in order to better serve businesses in the park.
- *Protect, preserve, and where possible, restore the natural resources of the park.*
  - Encourage commercial and industrial uses that respect the existing natural features of the park and its environment.
  - Take appropriate steps to ensure that air quality standards are met during development of the park and at full build-out.
  - Protect designated environmentally sensitive properties.
  - Protect view corridors and dark sky vistas.
  - Encourage water conservation.

## **1.2 Vision Statement and Strategic Guiding Principles**

In addition to these objectives, the QDMC and RIEDC adopted a vision statement and strategic guiding principles in December 2000 that served as the springboard for this Master Plan revision. The Vision Statement is shown below. A detailed matrix showing the same information is shown separately in the Master Plan link to the RIEDC website, [www.riedc.com](http://www.riedc.com), and is considered an integral part of the Master Plan. The vision statement and strategic guiding principles have been used to develop this Master Plan.

## **QUONSET DAVISVILLE PORT AND COMMERCE PARK VISION STATEMENT**

*November 20, 2000*

*It is the vision of the Boards of Directors of the Rhode Island Economic Development Corporation and the Quonset Davisville Management Corporation that, with responsible stewardship of the existing resources, we can foster and encourage the development of the Quonset Davisville Port and Commerce Park through the integration of transportation and land planning in a way that balances local, state, and regional economic benefits with respect for the environment. Planning for the reuse of the Port and Commerce Park shall recognize the unique opportunities presented by industrial land with road, rail, air, and water access and shall respect the requirements under which the U.S. Government transferred Quonset and Davisville.*

*More specifically, the Boards envision that the Quonset Davisville Port and Commerce Park Master Plan will foster long term local, state, and regional economic growth through expansion of sustainable, value added, and environmentally friendly industrial activity and the provision of high quality jobs in a range of skill levels at Quonset Davisville. The Master Plan also will foster best management practices and state-of-the-art environmental controls to create positive effects on the quality of life in, and to limit negative effects on, our host community, North Kingstown, and other neighbors.*

*We envision a cooperative effort to fully fund a seamless transportation network for the movement of goods and individuals to, from, and within the Quonset Davisville Port and Commerce Park, including meaningful public transportation, with the greatest benefits to, and the least possible negative impact on, local and surrounding communities.*

*We envision that Quonset State Airport will continue to serve both military and general aviation needs and will help to meet the changing aviation needs of Rhode Island and of businesses located at the Quonset Davisville Port and Commerce Park.*

*We envision supporting and expanding existing waterfront uses and exploring new uses that: are in the best interests of the State; are economically feasible; enhance the local, state, and regional economy; protect the natural environment; and respect the quality of life of our host community and other neighbors.*

### **1.3 Organization of the Master Plan**

The 2003 Master Plan maintains the organization established in 2001.

### **1.4 Changes between the 2001 and 2003 Master Plans**

Primary changes between the 2001 and 2003 Master Plan are the elimination of all references to a container port and intermodal facilities and amendment of land use descriptions. The document maintains the user-friendly aspect of the 2001 update. The following describes the major differences in the two plans.

#### *Executive Summary*

The 2003 Executive Summary focuses on the 2003 Master Plan.

### *Chapter 1 – Introduction and Background*

The 2003 document continues to update the history of planning and community discussion regarding the development of Quonset Davisville. This account focuses on the last few years.

### *Chapter 2 – Context*

The context in which the 2003 Master Plan was revised with regards to consistency with the Town of North Kingstown Comprehensive Plan, the Base Reuse Plan, and other plans related to the Park. Assumptions made about the waterfront were amended to remove references to a potential container port.

### *Chapter 3 – Land Use Plan*

Generally, a modified overall land use concept has been applied to the park. New uses have been identified and others have been eliminated. All references to a container port facility at the park have been eliminated from all maps and text of the Master Plan based on the Governor's opposition.

Specifically, RIEDC took the opportunity to continue to revise land use descriptions to reflect those identified in the 1994 Base Reuse Plan and the North Kingstown Comprehensive Plan. Individual district plans were also revised using new land use descriptions and a revised overall land use concept. These changes led to further actions beyond the Master Plan revision including the development of potential zoning changes and a special overlay district applying to the Park, which will be proposed to the North Kingstown Town Council to be adopted as part of the town's zoning.

### *Chapter 4 – Transportation*

There were changes to this chapter. Increasing capacity on Davisville and Cross Park Roads from two lanes to four lanes is not longer seen as necessary. Clarity was made regarding transit-oriented development, which typically includes residential areas. A transit center focusing around alternative forms of transportation, including public transit could be considered. Intermodal and its inferences to the transport of container cargo have been addressed. A freight multi-modal center could also be considered to transfer freight to and from businesses within the Park by rail to truck, and vice versa. Both of these centers are proposed to be consistent in scale and intensity as the surrounding areas.

Other elements of this chapter addressed included the changes to traffic projections as a result of new employment projections based on the revised land use concept; new improvements to Jones and Northrup Roads and Cripe Street; and the feasibility of a roadway from the Davisville Waterfront District to the underutilized parcel on the eastern side of the airport.

### *Chapter 5 – Infrastructure Plan*

Minimal changes were made to this chapter, including the removal of container port references.

### *Chapter 6 – Development Program*

As with other chapters, container port references were removed from the text. In the 2001 Master Plan, an implementation program was outlined, with reference to its development at a later date.

## **1.5 Milestones**

Understanding the past is the key to understanding the potential for the future. This description of milestones rehearses the past, while the remainder of the 2003 Master Plan focuses on the future. The point is made that there was more intense use in the past than at present and probably in the future because of concerns by some that the impacts of full build out will be worse than in the past. They will not. Also, the milestones are described to show the very interesting history of the use of the land, which affects the future significantly. For example, the Navy built pier facilities that support existing uses and have potential for future maritime activity.

Quonset Davisville accommodated more intensive activity on site between the 1940s and the 1970s than it does today or is likely to in the future. This is because two U.S. Navy installations were in full operation at the 3,000-acre site during that period, when thousands of military personnel and civilians trained and worked there, and thousands of aircraft and marine traffic operations were conducted. The U.S. Navy constructed the multimodal transportation facilities that still exist at the site, including a large airport, deepwater marine facilities, railroads and roadways.

Relatively, the impact of this activity on the host community of North Kingstown was probably more intensive than it is today, since the bases had more people on site than the Town's total population and roadway access capacity was more limited than it is today. At its peak, the bases had approximately 25,000 people on site while the Town's population was much less. In 2001, QD had only 6,200 people on site. In the near future, there will be more highway and railroad capacity than ever before, thereby lessening traffic impacts on the Town.

Below is a time line of the major milestones in the use, construction, development and planning for future redevelopment of Quonset Davisville.

## CHAPTER 1 : INTRODUCTION AND BACKGROUND

<p>Farmlands and summer houses were located along Quonset Point shoreline.</p> <p>1898-RI Militia Camp Grounds established at Quonset Point during Spanish American War.</p>		<p>1940s- Commuting to Quonset was largely by jitneys (buses).</p> <p>1940- 440 acres of new land created by hydraulic dredging of Narragansett Bay bottom for Quonset Naval Air Station Runways 16/34 and 5/23; perimeter bulkhead constructed. Also, deep shipping channels and turning basin were created, including the 1,127 foot-long Carrier Pier channel.</p> <p>April 1, 1941- "Quonset Special" railroad train carried 400 civilian construction personnel from Providence Union Station. Service continued through 1943 operated by New York, New Haven and Hartford Railroad. Additional service continued to 1974 on 26 miles of railroad track.</p> <p>July 12, 1941- Quonset Naval Air Station of commissioned.</p> <p>February 27, 1942- US Navy Construction Battalion Center (NCBC) was established in Davisville to complement activities at the adjoining Naval Air Facility at Quonset Point. A pier was built to ship materials and men for construction of overseas bases. Camp Endicott was established as the training center for military construction battalions. Over 100,000 men were trained in its three years of operation.</p>			<p>1973- Quonset base operations closed.</p> <p>1958- Quonset facilities employed 5,000 civilian workers.</p> <p>Post World War II- Davisville operations drastically reduced until it was reactivated during the Korean War. At that time the second pier was built at Davisville. Operations continued through the Vietnam conflict</p>			<p>1975-1992- NCBC phase down cycle.</p> <p>1974- US Navy declared surplus the Naval Air Station and the Naval Rework Facility at Quonset Point. 5,000 civilians lost their jobs and 2,000 Naval personnel were reassigned.</p> <p>1974- RI Department of Economic Development (DED) and RI Port Authority (RIPA) and Economic Development Corporation were established to create an economic development project at Quonset.</p> <p>19740 RIPA acquired much of former Navy real estate assets at Quonset, and assigned responsibility of developing Quonset as a modern business and industrial park.</p>		<p>1978- \$25 million General Obligation Bond funds land acquisition, demolition and infrastructure.</p> <p>1980- Municipal Services Transition Agreement between the Town of NK and RIPA and Economic Development Corporation. Agreement establishes various forms of municipal services and tax payments associated with such services.</p> <p>1984- Kiefer Park established, a vision of future high quality class of industrial development. Also in mid 1980s, Electric Boat employment peaks at 5,500.</p> <p>1992- US Navy Announces closing of NCBC at Davisville.</p> <p>1992- Town of NK issues its Comprehensive Plan. Its land use plan and zoning map support industrial development at Quonset Davisville, the largest employment center in Town.</p> <p>1992- Toray Properties, Town of NK and RIEDC enter into a 10-year tax stabilization agreement that identifies a fixed annual tax payment to Toray. RIEDC and RIDOT provide subsidies to the Town (e.g., 10 acres for a Public Works Garage, a fire station parcel, and paving 2 town roads) to support the tax break to Toray.</p>			<p>1994- Comprehensive Base Reuse Plan, Davisville Naval Construction Battalion Center issued. The Reuse Committee was composed of representatives of the RIPA (now RIEDC), the Town of NK, RIDEM, SPP and the Narragansett Indian Tribe. The Plan's preferred strategy was a mixed-use plan focused on economic development for some 900 acres between West Davisville and Calf Pasture Point and along both sides of Davisville Road. The Base Reuse Plan was consistent with the Town's Plan.</p> <p>1994- NCBC is closed.</p> <p>1996- Municipal Relations Agreement with the Town of NK and the RIEDC. This reaffirmed payment in lieu of taxes from the Park tenant leases to the Town. In addition, the Municipal Agreement sets forth certain understandings and agreements for the sale and development of properties in the Park.</p>		
PRE-1940	1940						1950-1970				1980-1996				
PRE-MILITARY							MILITARY				DECOMMISSION				

<p>1996- RIDOT and the Federal Highway Administration issue the Record of Decision (ROD) for the realignment of Route 403 between Routes 4 and 1 and into the entrance of Quonset Davisville. The project would create a four-lane limited access expressway facility linking Quonset Davisville with the Interstate Highway System (I-95) located five miles away.</p> <p>1996- Vision Map was produced by RIEDC to illustrate a development concept for the entire 3,000-acre site. The Vision Map is the first graphic attempt to link both Quonset and Davisville into a single unified development. This map was the beginning of the master plan effort.</p> <p>1996- \$70+ million bond issue was passed to fund infrastructure improvements at Quonset Davisville and the Freight Rail Improvement Project.</p> <p>1996- Quonset Point Davisville Intermodal, Inc. (QPDI) proposes a container port to be developed at Quonset Davisville. QPDI, Inc. designated interim port developer by RIEDC. A planning symposium and peer review of the QPDI proposal resulted in elimination of liquid and dry bulk shipping previously proposed by QPDI, Inc.</p>	<p>1997- RIEDC begins to prepare the first Master Plan for the entire property at Quonset Davisville Port and Commerce Park. The draft Master Plan was completed in December 1997 and provides a land use and infrastructure plan to accommodate full build-out of the 900 remaining available acres for industrial and commercial development over a 20-year period.</p> <p>1998- RIDOT and the Federal Railroad Administration issue the ROD for the Freight Rail Improvement Project (FRIP). The project would provide a third track for exclusive use of freight trains between West Davisville and Central Falls. The project purposes are to separate freight traffic from high speed passenger trains operated by Amtrak in the Northeast Corridor and to provide for high and wide load freight rail cars between RI and the Midwest markets via an existing freight rail intermodal center in Worcester, MA. This new capacity would support shipping freight by rail from Quonset Davisville industries.</p> <p>1998- Master Plan was revised to address comments from additional public reviews.</p> <p>1998- QPID, Inc. adds Stevedoring Associates of America, Inc. (SAA), a Seattle-based port developer, to its team. Now called Quonset Point Partners (QPP), they propose a container port near the airport.</p> <p>1998-2001- RIEDC begins to implement Master Plan recommendations including capital improvements such as railroad track and roadway rehabilitation, construction of new roadway, formalizing parcel plans in three districts and new sign program.</p> <p>1998- The Governor establishes a Stakeholder Process to review container port issues at Quonset Davisville including over 70 public agencies, special interest groups and individuals. The process resulted in no consensus regarding the port but a set of port development principles.</p>	<p>2000- RIEDC and the Town of NK establish the <i>Quonset Davisville Lot Recording Agreement</i> to ease transfer of developable parcels to a third party by recording a proposed development plan (e.g. Concept Plat and Lot) with the Town.</p> <p>2000- RIEDC prepares a Port Feasibility Study. A compact, highly automated port was determined to be feasible and four optional locations were indicated at Quonset.</p> <p>2000- Very successful year of growth at the Park. Park employs 6,250 people in 115 tenants. Park's freight rail volume now represents 28% of the Statewide total. Fifteen firms invest \$40 million adding 200 new employees in the Park. SENESCO and Electric Boat increase boat manufacturing activity. Since 1996, Electric Boat had doubled its employment to 1,600. NORAD opens a 50,000-square foot vehicle repair and processing center for Chrysler off-lease vehicles. Toray Plastics America has invested \$600 million in plant and now employs 675 persons.</p> <p>2000- RIEDC prepares a vision statement and strategic guiding principles for future development of Quonset Davisville Port and Commerce Park. Both QDMC and RIEDC Boards adopted the comprehensive principles in December. The principles are to be used to guide development of the Master Plan.</p> <p>2000- Town of NK completes and approves Master Plan for Allen Harbor and Calf Pasture Point, lands to be transferred to the Town from the federal government. The plan recommends marine-oriented recreational uses and conservation land.</p> <p>2000- SPP issues Industrial Master Plan as part of the State Guide Plan. It supports industrial development at Quonset Davisville, the State's largest industrial park.</p> <p>2001- NORAD adds Volkswagen calls to Port Davisville in February. They handle about 45,000 vehicles a year.</p> <p>2001- RIEDC updates Master Plan.</p> <p>2001- RIDOT begins construction of the new Route 403/1 interchange at the main entrance of the property.</p> <p>2002- SPP approves the 5-year update to the Town's Comprehensive Plan.</p> <p>2002- The Governor supports preliminary studies in preparation for an environmental impact study for a possible container port. The studies are halted at the end of the Governor's term at the end of the year.</p> <p>2003- RIEDC revises Master Plan.</p>
<p>1996</p>	<p>1997-1998</p>	<p>2000-2003</p>
<p>REDEVELOPMENT</p>		

## **1.6 Public Participation and Coordination**

RIEDC and its consultants continued dialogue between the Town of North Kingstown, QDMC and the Board of Directors to ensure that all parties were aware of the changes that would occur in the Master Plan revision. Several meetings from May through July 2003 included the Town's planning staff to ensure that all unresolved issues were addressed and solutions were discussed. In September 2003, a working session with the North Kingstown Town Council allowed for the exchange of changes to the Master Plan and potential concerns.

## **1.7 Preparers**

The 2003 Quonset Davisville Port and Commerce Park Master Plan was prepared by Maguire Group Inc. (MGI) of Providence, Rhode Island. MGI was chosen based on their involvement with the preparation of the Davisville Base Reuse Plan of 1994 and that documents importance in the development of the new land use concept for the Park

## **1.8 Acknowledgment**

RIEDC would like to acknowledge Parsons Brinckerhoff Quade and Douglas, Inc. (PB), for they prepared the 2001 Master Plan and many of the chapters in this Master Plan remain as written by PB, with the exceptions of those noted previously. RIEDC would also like to acknowledge the Town of North Kingstown for their cooperation and assistance in preparing the 2003 Master Plan revision.

## 2.0 Context

This chapter discusses the external and internal influences that affect the future development of Quonset Davisville Port and Commerce Park. In addition, the chapter discusses assumptions regarding waterfront development. External influences include market supports for employment sectors suitable for the site, based on an analysis of overall economic conditions, as well as plans and projects of others near the site. Internal influences include the site's constraints and opportunities, including how regional influences affect internal site opportunities. The chapter concludes with a discussion about the assumptions regarding the waterfront, potentially the greatest resource available at the site.

### 2.1 Market Influences

Bonz/REA, Inc conducted a market analysis of the prospective business park development at Quonset Davisville Port and Commerce Park for the 2001 Master Plan. The purpose of the market analysis was to identify the potential market supports for various land uses that have been proposed at the Park. The Market Analysis report is included in the Technical Support Documents of the Master Plan. The key findings of Bonz/REA's research and analysis are still relevant to the 2003 Master Plan, and are presented here:

***Rhode Island's economy has shifted its emphasis from manufacturing to service and professional sectors.***

The Rhode Island economy has exhibited declining employment in most manufacturing sectors, offset by recent increases in service sectors such as business services and financial services. Future growth opportunity sectors include professional service industries, concentrated in sectors such as finance, insurance, health services, business services, software, and educational services. Manufacturing sectors with projected growth include various types of medical and electronic instruments, computer hardware, and various "old economy" industries such as printing and publishing, plastics and chemicals.

***While skill levels are higher in southeastern Massachusetts than in most of Rhode Island, Washington County's growing population exhibits higher-end educational and occupational characteristics that are similar to those in southeastern Massachusetts.***

In general, the Rhode Island labor force is characterized by a slightly lower-skilled, more blue-collar profile than the labor force in neighboring parts of Massachusetts. In the southern Rhode Island counties of Kent and Washington, however, the labor force bears strong similarities to the work force in southeastern Massachusetts. This region – Washington County in particular – contains Rhode Island's fastest growing population, and the quality of its coastal attractions and rural character offers promise that this area can continue to attract high quality professional labor for high-wage industry sectors.

***Quonset Davisville's success would reflect its access via highway, rail, sea and air. This unique combination of access modes will be attractive to a broad range of industries, and will enable the park to attract a broad range of local as well as out-of-state businesses.***

Upon completion of currently planned highway and rail improvements, the Park will offer good highway access as well as triple-level auto carrier rail service, and will stand alone as the only business park location in Rhode Island with rail access. In addition to these access modes, Quonset State Airport accommodates business aircraft, and T.F. Green Airport provides a

convenient air cargo facility. Overall, the Park will offer a combination of transportation modes superior to all other business parks in the area.

***Quonset Davisville has achieved the strongest absorption among Rhode Island's business parks.***

In recent years, annual absorption has ranged from 0 acres in 1998 to 35 acres in 1997, and 17.3 acres in the first quarter of 2001; average absorption since 1997 (including an annualized absorption figure for 2001 based on its first quarter performance) has averaged 26.5 acres per year. This exceeds recent absorption at all other business parks in Rhode Island and is competitive with recent absorption in southeastern Massachusetts. New acreage has been sold to existing tenants seeking expansion opportunities, rail-dependent businesses, and tenants have included national as well as international corporations. Later data made available in October 2001 indicates that RIEDC sold and leased 33 acres of land during the first three quarters of 2001.

***Recent performances at the other active business parks in Rhode Island indicate that a high-quality business park environment at Quonset Davisville (upon completion of currently planned improvements) could achieve a high level of performance.***

The three primary active business parks in Rhode Island include the Highland Corporate Park in Cumberland, the Centre of New England in Coventry, and the Western Cranston Industrial Park. Highway access to these parks currently is superior to Quonset Davisville's, but each of these parks features its own drawbacks. These include difficult terrain (Highland Corporate Park), the absence of upscale park planning principles and design covenants (Centre of New England, Western Cranston), and the lack of alternative shipping modes (all three). Despite these limitations, these parks have achieved escalating land prices, and recent tenants at Highland Corporate Park and Centre of New England have included regional and national tenants as well as the traditionally Rhode Island-based tenants.

***Active business parks in southeastern Massachusetts have achieved long-term average absorption rates of approximately 20 acres per year, attracting major national corporations in high technology as well as "old economy" industrial sectors.***

These parks are conveniently situated relative to the Boston area's labor force, suppliers, and markets, and offer direct access to interstate highways 95 and/or 495.

***Quonset Davisville will be able to command strong positions in three market niches: (1) businesses requiring large-scale industrial buildings; (2) businesses requiring access to rail, air, or seaborne shipping; and (3) high-wage, technology-driven and other professional service-oriented business attracted to southern Rhode Island.***

In competition for these niches, the Park will derive respective advantages from: (1) ample acreage, flat land and cost advantages (relative to southeastern Massachusetts); (2) its ability to serve a unique combination of highway, rail, air and seaborne transportation modes; (3) the growing, professional labor force in Washington County; (4) Rhode Island's economic growth opportunities in professional service sectors; and (5) the site's array of amenities (waterfront locations, general aviation airport, golf course, etc.)

***Quonset Davisville absorption should increase as currently planned improvements are completed.***

Over the next five years, the Park will be able achieve absorption consistent with its recent performance, or 15 to 25 acres per year. In years six through ten, after completion of important highway access improvements, absorption should increase to an average of 20 to 30 acres per year. Over time, the Park will face new challenges from tenant turnover and varying business cycles, but land absorption will be augmented by growth among its established base of existing tenants, and could achieve average levels of 30 to 40 acres per

year. The attainment of such long-term absorption, however, is contingent in part upon the presence of the new highway access improvements, the ongoing availability of increased air cargo shipping capacities at nearby T.F. Green Airport, and the availability of double-stack rail freight capability. Such absorption level also is contingent on marketing.

## **2.2 Plans and Projects**

### **2.2.1 State Guide Plan: Industrial Land Use Plan**

The Rhode Island Statewide Planning Program (SPP) in the Department of Administration is the central planning agency for State government. One of the objectives of the program is to prepare strategic and system plans for the state. The express purpose of the State Guide Plan is to guide the growth and development of Rhode Island. The State Planning Council adopted one of these plans, Industrial Land Use Plan, State Guide Plan Element 100, in August 2000. The overall goal of the Industrial Land Use Plan has been the same since 1990, to keep enough land in Rhode Island in industrial use to sustain a diverse economy. The 1990 Industrial Land Use Plan observed that the availability of “good” industrial land is being threatened by conversion to residential uses, undercapitalization and lack of specific direction from the public sector.

The industrial development of Quonset Davisville Port and Commerce Park is consistent with the State’s 2000 Industrial Land Use Plan, which documents a need for nearly 2,500 acres for expansion of industrial use in 2020. Only approximately 1,500 acres were vacant with public water, sewer, and no physical constraints (i.e., “prime” industrial land) in 1997/8, according to an SPP Inventory.

Quonset Davisville’s remaining 678 acres of vacant, developable land represents a significant resource for future industrial development in Rhode Island. None of these 678 acres is threatened by conversion to residential development, undercapitalized, or lack specific direction by the public sector. This Master Plan recommends full use of these 678 acres for economic development purposes. SPP stated in August 2001 that the 2001 Master Plan’s emphasis on reserving large sites “is consistent with the Industrial Land Use Plan policy that recognizes the rarity of such resources in Rhode Island.”

The 2000 Industrial Plan describes Quonset Davisville in some detail, reporting data and the proposed development program from the 1998 Draft Master Plan for the site. It recognizes the importance of Quonset Davisville as an industrial resource for both North Kingstown and the State as a whole. While adequate water supply is cited in the Industrial Plan as one of the constraints for economic development elsewhere in the area, this is not a constraint at Quonset Davisville. There is sufficient water capacity to support projected growth at the site.

### **2.2.2 State Guide Plan: Economic Development Policies and Plan**

In addition, in August 2001, SPP stated that the 2001 Master Plan appears to conform to Element 211 of the State Guide Plan, the Economic Development Policies and Plan that promotes by the following policy:

“B.2. Conserve and enhance desirable existing industrial areas, office complexes, and concentrations of service activities to maximize the investment and utilization of existing infrastructure....”

### 2.2.3 State Guide Plan: Rhode Island Freight Rail Plan

In 1993, the Division of Planning of RI Department of Administration issued the Rhode Island Freight Rail Plan. The Plan indicated a priority list of rail lines that merit rehabilitation assistance. The Quonset Point/Davisville Industrial Track was ranked second, behind the Providence and Worcester Main Line. Since then, there has been some rehabilitation of railroad tracks and grade crossings within Quonset Davisville, augmented by funds approved in a 1996 bond issue. Rehabilitation of the P & W Line as first priority has been undertaken, which also is important to Quonset Davisville. Rail rehabilitation is necessary to establish a freight rail link between Quonset Davisville and Worcester, MA, where there is capability to handle double stack container freight cars to serve the Midwest markets. The Freight Rail Plan indicates that the State fully recognizes the freight rail potential of the site.

In August 2001, the RI Statewide Planning Program stated that the 2001 Master Plan is consistent with the recommendation of the Freight Rail Plan that:

“The state and its congressional delegation should aggressively promote a balanced approach to address shared use by the different rail modes on the Shore Line, including the development of a third track for freight rail and its ability to accommodate high/wide loads, including tri-level automobile transport to/from the Port of Davisville.”

### 2.2.4 Rhode Island Ground Transportation Plan

The 1998 Ground Transportation Plan currently was updated and was adopted by the State Planning Council in *Transportation 2020* in August 2001. The 1998 Plan has a number of recommendations that remain valid today. The Plan recognizes the importance of Quonset Davisville as a key origin and destination for commuters, and encourages many methods to improve transportation connections to the Park. This Master Plan for Quonset Davisville incorporates all of the following recommendations in the State’s Ground Transportation Plan:

2-5 Provide convenient multi-modal connections; maintain and improve connections and amenities at other important terminals, including Quonset Davisville. (Note the Master Plan for Quonset Davisville recommends that two transit centers be located in the Park at West Davisville and Executive Park.)

3-4 Provide a high level of transportation service at Quonset Davisville Port and Commerce Park.

- Study an Interstate ramp system at RI-4/I-95. (Note the 1998 Draft Master Plan identified the need for this access improvement, since there is no connection between these two major expressways southerly to access Quonset Davisville. RIDOT has subsequently included this future improvement for planning and environmental review in the Transportation Improvement Program.)
- Complete the Freight Rail Improvement Program (See discussion below and in Chapter 4.0 in this Master Plan.)
- Complete the Quonset Access Road (See discussion below and in Chapter 4.0)
- Determine the needed transit, ridesharing and bicycle/pedestrian facilities and services for the increased number of commuters. Provide these facilities and services, so as to maximize the efficiency of the transportation system. (See Chapter 4.0.)

3-9 Test the potential for new transportation service by rail and water.

- Expand water transportation system connections. Pursue experimental (pilot) water transportation service to...Quonset Davisville... (RIPTA considered water ferry service to the Park in 1998 and found it infeasible at that time. As employment grows at the site, there will be increasing demand for water ferry service.)
- Plan for the incremental extension of the Boston-Providence commuter rail service to T.F. Green Airport and Wickford Junction. (See Chapter 4.0.)

### **2.2.5 Town of North Kingstown Plans**

The Master Plan must be consistent with two North Kingstown plans: the Allen Harbor and Calf Pasture Point Master Plan adopted in 2000 and the Town of North Kingstown Five-Year Update adopted in 2001 and approved by the State in 2002. Additionally, the Comprehensive Reuse Plan: Davisville Naval Construction Battalion Center (Base Reuse Plan) of 1994 is also considered even though there is no legal requirement that the plans be consistent. Both the Town and RIEDC have participated in planning efforts of the base since 1994.

The 2003 revision process considered all three of these documents and examined closely the consistencies and inconsistencies between them and the Master Plan. Dialogue with the Town led to the identification of commonalities, conflicts and gaps between the plans and recommendations for amendments to the Master Plan for resolution. The result is this document.

### **2.2.6 Relocated Route 403 Project**

The Relocated Route 403 Project is being designed and constructed by the Rhode Island Department of Transportation (RIDOT) in stages. When completed after 2007, a limited access 4-lane freeway will connect Route 4 to Quonset Davisville at Post Road (U.S. Route 1) at the entrance to the Park. This connection will improve regional access to and from Quonset Davisville and will stimulate new businesses to locate there. (The projected average annual daily traffic in the Park is within the capacity of the completed Route 403 Relocation design.) Stage 1 between Post Road and the Northeast Railroad Corridor (Amtrak) began construction in spring 2001, and will be completed in 2006 under four separate construction contracts:

- Temporary Bridge No. 369 at Amtrak, completed Fall 2002
- Post Road Interchange Phase 1, completed Fall 2003
- West Davisville Road Interchange, completed end 2003
- Post Road Interchange, Phase 2, Spring 2006

Stage 2 will complete the freeway segment between Amtrak and Route 4 and, according to RIDOT, is expected to be included for funding in a subsequent Transportation Improvement Program (TIP.)

### **2.2.7 Freight Rail Improvement Project**

The Freight Rail Improvement Project (FRIP) of the RIDOT is scheduled to be completed in December 2003. It will improve transport of freight in and out of Quonset Davisville Port and Commerce Park. FRIP will provide for a third freight railroad track in the Northeast Railroad Corridor between West Davisville and Central Falls, north of Providence. This will allow freight trains and high speed Amtrak passenger trains to pass safely on independent tracks. Moreover, the project will provide vertical clearance to accommodate both tri-level automobile carriers, providing necessary clearance to serve the current and future development of automobile and other imports and exports at Quonset Davisville. Currently, trucks carry the automobiles and other freight. Combined

with the improved railroad tracks on site, especially at the connection to the Northeast Corridor, some of the freight shipped in and out of Quonset Davisville can be shifted to trains. This shift in mode will reduce the impact of Quonset Davisville's further growth on local and regional roadways. As of July 2001, RIDOT had awarded three of eight construction contracts. All eight contracts must be completed before the third track can be used. The 1998 Draft Master Plan contains a detailed account of existing railroad conditions and recommendations for improvement to railroad facilities on site.

### 2.3 Site Constraints

As shown in Figure 2.1, there are few, if any, natural constraints to development of the remaining 678 acres at Quonset Davisville Port and Commerce Park, for the following reasons:

- They are flat upland areas;
- They do not contain wetlands or other natural areas that are designated to be preserved;
- They have utilities or soon will have under RIEDC's Capital Improvement Program; and
- They are "clean" sites, some having been remediated by the Navy, as appropriate.

The land use plan has intentionally avoided wetlands and woodlands and other natural areas of environmental significance. The constraints that do apply to these sites are imposed by regulation, namely the RIEDC covenants and the Town's Zoning Ordinance. In contrast, development of the waterfront, particularly in the water, is significantly constrained by State and Federal regulations, but not prohibited unless mitigation is deemed to be inappropriate or ineffective.

Site constraints at the Park are summarized below in the same order as the subjects appear in Chapter 10, Environment, in the 1998 Draft Master Plan. The detailed information in Chapter 10 is not repeated here, but can be used as a reference since it addresses issues raised by comments at the six public meetings on the 1998 Draft Master Plan, and incorporates responses from regulatory agencies.

Waters of the Narragansett Bay adjacent to the site are classified differently by two State agencies. These differences may be constraints to waterfront development at the site. According to RIDEM,

"RIDEM has designated the waters around the area as SA "suitable for shellfishing and suitable water contact recreation" and CRMC has designated the waters as Type 6 for industrial development. CRMC designated water type according to the land use at the time of designation. There is no correlation between the CRMC Water Type designation and the water quality, habitat or living marine resources adjacent to the shore. Each designation originated differently using different criteria."

Coastal and upland wetlands are considered physical and regulatory constraints to development. Therefore, they have been avoided in the designation of future land areas to be developed for commercial or industrial uses.

Floodplains have not been considered a development constraint to existing uses at the Park. Much of the land area adjacent to the Bay has been designated a 100-year flood zone or high velocity wave damage zone by the Federal Emergency Management Agency. Development in these zones, however, is not prohibited by FEMA, but it must meet flood plain management requirements.

According to RIDEM, habitat for endangered species exists at Quonset State Airport, in grassy portions (Grasshopper Sparrow) of the Airport and its beaches (Least Tern). RIDEM stated in

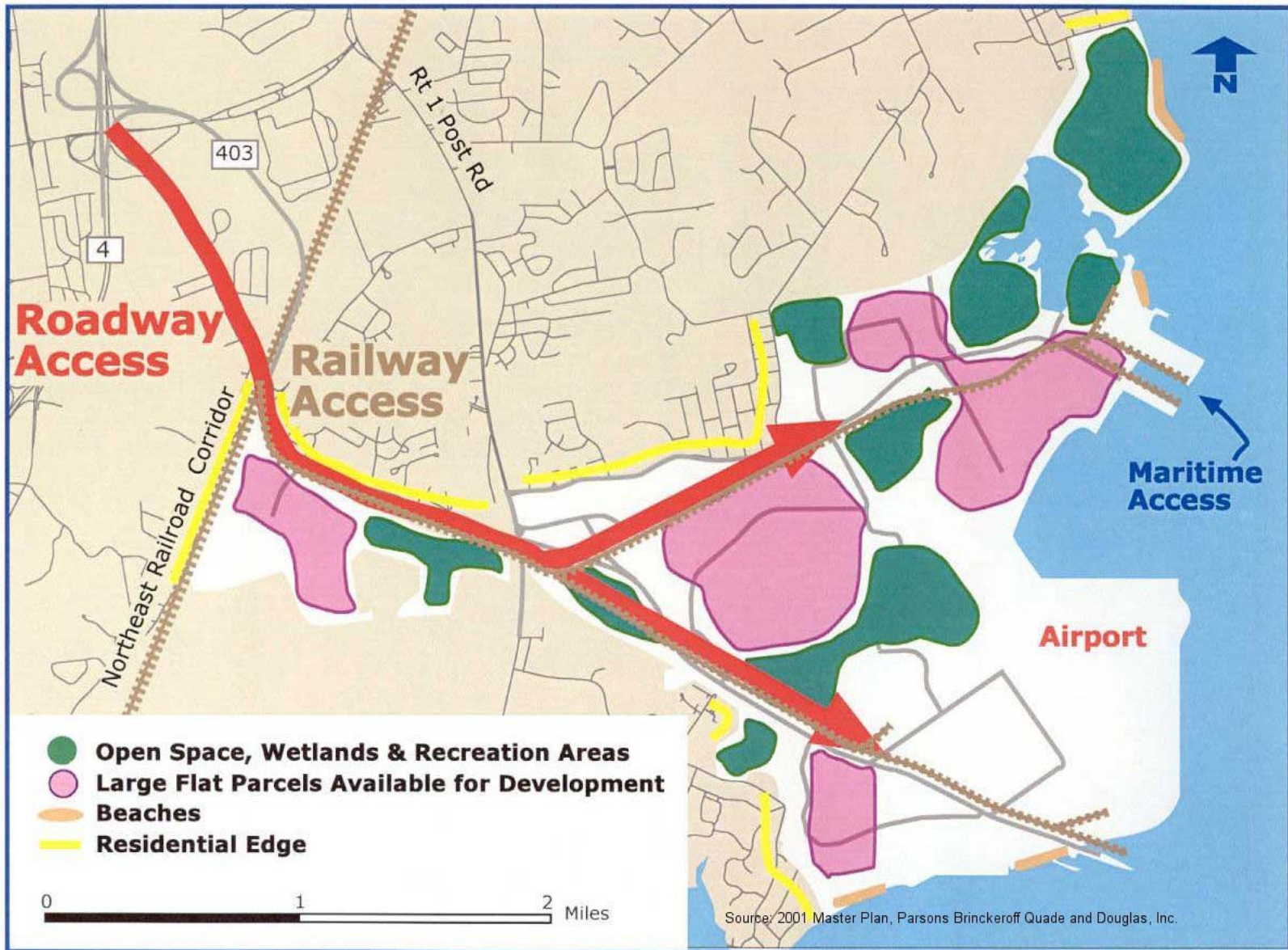


Figure 2-1. Site Influences.

comments on the 1998 draft Master Plan that other endangered species have been reported in the waters off the site, including Sea Turtles in the navigation channels. Any development or increased shipping activities may impact these habitats including estuarine habitat or shellfish and finfish resources of the area. Accordingly, site visits and coordination with the RIDEM Water Quality review process and the RI Natural Heritage Program are required for waterfront development.

There are no historic sites that constrain development of land proposed for industrial and commercial development. The Allen-Madison House site near North Davisville and Calf Pasture Point is not proposed for industrial development. The site will be preserved. There are no known archaeological constraints, as much of the entire site has been disturbed by development.

Air quality impacts of any industry or power plant must comply with applicable air pollution control regulations. Air quality impacts of increased traffic and development may have to be studied in the future, according to RIDEM's Office of Air Resources. Such impacts will be factored into the State's travel demand model as it is revised and air quality impacts will be measured in accordance with Federal requirements that the state transportation plans conform to the State Implementation Plan for Air Quality.

In comments on this Master Plan dated September 4, 2001,

“RIDEM recommends that air quality studies be undertaken for the development of the commerce park that are equivalent to those required for a National Environmental Policy Act (NEPA) Environmental Impact Statement. The analyses should include emissions from all modes of transportation envisioned by the Master Plan. This would include a micro scale analysis of CO emissions to assure that no human health related problems from CO might be anticipated. RIDEM also suggests a mesoscale analysis of VOC and NO<sub>x</sub>, as well as CO<sub>2</sub>, SO<sub>2</sub> and fine particulate matter. This would also provide needed baseline data for the Transportation Management Association's work.”

Such analyses as indicated are beyond the scope of this Master Plan. Such studies may be more appropriately included in an environmental impact statement for a major development project.

Town ordinance and RIEDC development controls (often referred to as development package) regulate noise impacts associated with development. Noise, as a development constraint, may be a more critical issue at development sites adjacent to residential areas. Airport and waterfront developments including dredging noise impacts are federally regulated.

Airport approach zones in North Davisville and the Quonset Waterfront present constraints with respect to heights of buildings and use of property. Operations that are sensitive to vibration, attract birds, generate particulates or other emissions, or have a high density of employees are not appropriate for these areas.

Thirteen sensitive and natural areas have been identified in a 1979 Settlement Agreement between environmental groups and the State. The 2001 Master Plan Update reaffirms their protection, as stated in detail in the 1998 Draft Master Plan.

Four beaches are identified in RIEDC's proposed Public Access Plan, located in the Davisville Waterfront, Quonset Waterfront and Kiefer Park. These resources are protected by this Master Plan. Blue Beach in Kiefer Park has a six-car parking lot pursuant to the condition of the Coastal Resources Management Council (CRMC) Assent for White Cap Drive.

Hazardous waste sites have been identified in both Davisville and Quonset. A systematic cleanup is well underway by the Navy, in compliance with applicable regulations. Some of these sites may prove to be a development constraint, even after cleanup. Site development is coordinated by RIEDC, with full knowledge of the Navy remediation program.

## **2.4 Site Opportunities**

The 3,000-acre Quonset Davisville site, the largest industrial park in the State, has abundant opportunities to become more successful as an economic development project and as a community asset. Below is a list of the site's advantages for industrial and commercial development.

1. The availability of more industrially zoned land in flat large parcels than any other industrial park in eastern New England represents a significant strategic resource to fortify Rhode Island's economy.
2. On-site utilities including water, sewer, gas, electricity and fiber optic lines provide a full service network for potential varied new industries.
3. The multi modal characteristics of Quonset Davisville are unusual for an industrial park, but nonetheless are underused given the potentials for the Park. The large employment accommodated by the 2001 Master Plan represents an opportunity to make transit services successful. Recent public transit service has been virtually unused as most employees drive to work due in part to ample free parking. Accordingly, RIPTA canceled its bus service from Providence to Quonset Davisville in late 2001. Its service from Newport continues, with the expectation to attract additional riders. Future commuter rail extension to West Davisville represents a significant opportunity to reduce single occupancy vehicle commuting in the corridor between the site and Providence, the densest concentration of employee residences.
4. Roadway connections to the Interstate Highway system will be improved with the completion of RIDOT's Route 403 Relocation Project. Internal roads generally are substandard, but new roads are under construction.
5. Railroad connections to the Northeast Corridor also will vastly improve with the completion of RIDOT's Freight Rail Improvement Project in December 2003. The existing railroad facilities on site are underused; only a few industries receive or move product by rail, primarily in West Davisville, Davisville and Quonset.
6. Quonset State Airport, which includes that State's longest runway, represents another potential site asset for corporate-based aviation. With only 17,000 aircraft operations a year, about equally split between general aviation and the military, the Airport has additional capacity.
7. The deepwater channels located at the Davisville Piers and the Carrier Pier in Quonset represent another unusual opportunity for the industrial park. The current shipping uses (automobiles and seafood) only use the Davisville Piers. The Carrier Pier is used for ferry operations and has historically been used for ship repair. Only two industries - SENESCO and Electric Boat - use the channels to barge products manufactured on site.
8. Good water quality of the adjacent Narragansett Bay represents another untapped resource and recently has attracted aquaculture industries to the Park.

9. The four beaches, woodlands, inland wetlands, and golf course and water views represents open space assets that offer recreational opportunities for the regional community and employees at the Park.
10. The varied types of industries at the site provide the scale and opportunity for development of an eco-industrial park. Principles of eco-industrialism encourage the reuse of wastes as new resources and that all resources are used efficiently. Only five such parks have been developed in the U.S. The Fairfield Ecological Business Park in Baltimore, MD provides a fine example. Visit its web site at [www.buildfairfield.com](http://www.buildfairfield.com).
11. Redevelopment of brownfields at the Park, being cleaned up by the Navy, provides an opportunity to showcase less polluting industrial uses in the Park.

## **2.5 Waterfront Assumptions**

The Quonset Davisville waterfront represents an underused resource for a variety of water dependent uses including shipping, seafood processing, recreation, tourism, aquaculture and others.

Currently, active shipping takes place at Davisville Piers with the importing and exporting of automobiles, as well as seafood processing. The Master Plan assumes these activities will continue and grow.

Waterfront alternatives under consideration include expanding the existing shipping, shipbuilding and aquaculture industries, marine support industries and marinas. In addition, waterfront tourism is being considered by RIEDC and upland areas of the Davisville Waterfront can be developed for other water-related industries, as appropriate, as described in Chapter 3.0, Land Use.

Residential uses such as waterfront condominiums are not encouraged here since there is a shortage of prime industrial land in the State and Quonset Davisville should be preserved for such use. In this manner, scattered industrial development in suburban locations can be avoided by channeling such development opportunities to already zoned and serviced sites such as this one. This is one example of how the Park's Master Plan implements "Smart Growth" land use planning principles.

Additional marinas for pleasure craft are possible at the site, possibly at Davisville, but should not be developed in such a manner that they interfere with the water-related industrial functions of the site. Marina development can also be accommodated at Allen Harbor and Little Allen Harbor where appropriate access is already provided without interfering with water-related industrial functions.

## 3.0 Land Use

This Chapter presents the overall land use concept and district plans. The former establishes the overall physical development concept for the entire 3,000-acre Quonset Davisville Port and Commerce Park using functional uses. The latter describes existing conditions and proposals for future development of each district in the Park, while implementing the overall concept. This chapter received the most changes in the 2003 Master Plan revision process.

The land use plan will assist the RIEDC in locating businesses and industries in order to optimize use of the four modes of transportation facilities at the site (marine, airport, railroads, and roadways.) This strategy will guide the development of this large, multi-use site into a well functioning and unified industrial park. The plan is based on attracting and siting particular commercial and industrial sectors that have market supports, that are appropriate for the site, and that implement RIEDC objectives.

The land use plan preserves and enhances the unique community and regional assets of the site that include extensive water, woodland, historic and recreation resources. These assets add to the site's market appeal. The land use plan aims to "fit" this large industrial park into the regional and local context. This context includes nearby residential and commercial development in North Kingstown, Narragansett Bay resources and amenities, the Town of Jamestown (visible across the Bay from the site), regional expressways and the Northeast Railroad Corridor. The land use strategy embodied in the plan integrates the Park's assets into the surrounding community and, at the same time, provides for buffers between adjacent residential uses and industrial and commercial uses within the Park. In addition, the plan provides for activity nodes at gateway locations to serve both internal needs of Park businesses and employees and the external needs of the greater community.

### 3.1 Land Use Definitions

One of the major concerns raised by the Town of North Kingstown was inconsistency in land use definitions between their Comprehensive Plan, the Base Reuse and the 2001 Master Plan. This Master Plan applies land use definitions that both RIEDC and the Town find acceptable and appropriate. The next step would be to develop zoning that reflects these land uses, as discussed in the Implementation Program, specifically Section 7.3.

**Airport:** Airport land uses refer to uses that meet the needs of general aviation including runways, taxiways, buildings, parking and circulation, storage, and terminals. Existing Quonset State Airport lands owned by RIDOT and managed by RIAC (not RIEDC). Also included are existing lands owned by the RIANG, which plans to expand across Belver Avenue.

**General Industrial:** General Industrial uses are facilities for a broad range of industrial activities, including such enterprises as open storage, fabrication, material processing, packaging, distribution, and related offices and manufacturing facilities. The intent is to locate such activities in areas where minimal impact on adjacent areas will result and where infrastructure and transportation facilities are available or can be made available.

**Light Industrial:** Light Industrial uses are non-noxious industrial uses such as general manufacturing, research and development, warehousing and wholesaling, and light assembly or any combination thereof within enclosed buildings.

**Mixed Use Development:** Mixed Use Development uses are non-residential and intended to provide supportive land use activities to the commerce park including office, retail sales and services, and institutional and public activities. Office uses are low to medium intensity uses intended to prevent strip commercial development by allowing office uses but no other commercial uses. Ancillary retail sales and service uses are allowed to serve the office uses in the building(s) but restricted to limit detrimental impacts on nearby residential areas. Institutional and public uses include government, educational and training facilities as well as associated buildings, parking, and amenities.

**Public and Recreation:** Public and Recreation uses are intended for developed lands dedicated to public uses, such as federal, state, and municipal facilities. Publicly-managed recreational facilities, such as parks with facilities, golf courses, athletic fields, and bike paths, are also included as well as historic and cultural resources.

**Open Space and Conservation:** Open Space and Conservation uses are public and private undeveloped open spaces, including parks without facilities, beaches, conservation areas, preserves, and buffers around natural features and between adjacent land uses.

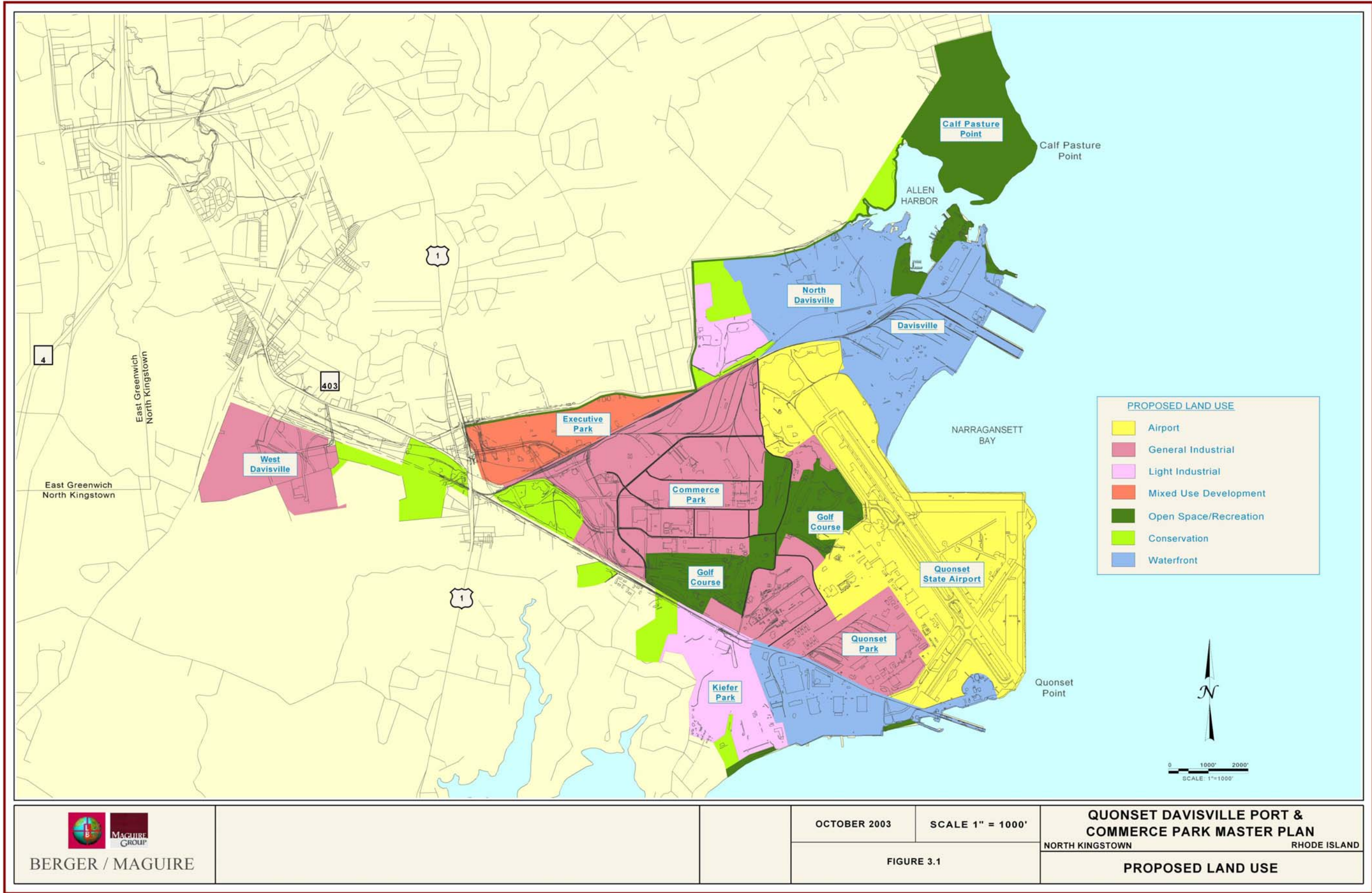
**Waterfront:** Waterfront uses are intended for water-related and water-dependent industrial and commercial activities, including those associated with tourism that use the water as a primary resource or an amenity to the activities. A 50-foot-wide buffer and bikeway is recommended along the west and north sides of the area designated for waterfront uses.

### 3.2 Overall Land Use Concept

Figure 3.1 shows the overall land use concept embodied in this Master Plan. It seeks to optimize development of Quonset Davisville Port and Commerce Park as a first class industrial and commercial park. This includes attracting businesses and industries that can make use of the Park's regional location assets, its on-site freight multi-modal and transit centers, and its large flat land parcels. Accordingly, businesses that are dependent on rail access are located close to the two railroad corridors. Similarly, water-related and water-enhanced uses are concentrated near the deep-water channel, marine facilities, and extensive waterfront. A mix of office and commercial uses are proposed near Post Road, to provide an attractive site entrance as well as to create a pedestrian and transit center that also is of appropriate scale with the abutting residential neighborhoods. Further, the land use concept provides for a landscaped buffer between the adjacent neighborhoods, such as along Newcomb Road and the edge of Kiefer Park, and industrial activities. It provides for integration of the surrounding community into the Park, most visible by a proposed bike path network that links the abutting communities with the site's open spaces and water resources. The goal is to make the Park more accessible as a regional and community asset.

The 2003 Master Plan still maintains the district organization of the Park established in the 1998 Draft Master Plan. The district sign system is also still applicable and remains on schedule to be expanded when the Route 403 Phase I Project is completed. The system uses color-coded signs to assist in way finding throughout the Park.

For the purpose of this Master Plan, multi-modal transportation facilities are divided into two distinctions. The first is a freight multi-modal center where freight is transferred from truck to rail and rail to truck and a transit center, which focuses on the movement of people through public transit, bicycles, walking, or the Park's internal shuttling services between businesses. (See Chapter 4.0 Transportation for more discussion.)



The existing uses at the entire site and potential new opportunities are viewed as a whole, since they must coexist and prosper, despite wide differences in type of land use, intensity of use, size of site, and access needs. The open space areas and other natural features such as wetlands and beaches are protected by this land use concept. These environmental features are valuable assets for both the industrial park and the surrounding communities. The land use concept is described below in four functional categories, which have been updated for this Master Plan:

- Industrial Development
- Mixed Use Development
- Waterfront Development
- Open Space, Recreation and Tourist Development

Residential development is not considered appropriate for this site because it is inconsistent with the economic development objectives of the QDMC and the RIEDC, the Davisville Base Reuse Plan, the Town of North Kingstown zoning districts, and the State Guide Plan (Industrial Land Use Plan.) While residential development is not appropriate for the Park, however, recreational uses, hotels, restaurants, select retail and child daycare facilities are proposed, under planning review, or developed. These ancillary uses are considered necessary assets for a first class industrial and commercial park.

This Master Plan emphasizes the Rhode Island Department of Environmental Management (RIDEM) statement in comments dated September 4, 2001 that, “these land uses fall under the Remediation Regulations (amended 1996) residential criteria and needs to be considered when locating these types of activities. Of particular concern is the Davisville portion of the park, which was generally cleaned to commercial/industrial standards by the Navy based on the approved Base Reuse Plan published in 1994. With respect to the Quonset portion of the park there are a number of Formerly Used Defense Sites (FUDS) which still require investigation and remediation. The responsibility for cleanup is generally being undertaken by the Army Corps of Engineers. Prior to utilization of this land coordination with RIDEM should occur to protect human health and the environment.”

### **3.2.1 Industrial Development**

Economic development of Quonset Davisville is the primary objective of RIEDC. The proper location of businesses and industries throughout the site is critical for successful economic development. Therefore, the primary focus of the land use plan is industrial development.

Industries that could benefit from access to railroads are located next to the two main railroad lines on the site. Sites adjacent to the railroad corridors should be reserved for distribution industries on a priority basis, since these transportation facilities exist and will be upgraded. Railroad access to the Park will be significantly improved in December 2003 when the Freight Rail Improvement Project (FRIP) is completed and adds a third track for freight use in the Northeast Railroad Corridor adjacent to the site in West Davisville.

Within the Park, the Quonset Main Line is located along the south side of Devils Foot Road and Roger Williams Way, linking the Quonset Waterfront with the Northeast Corridor. The Quonset Main Line borders or passes through the following Park districts: West Davisville, Kiefer Park and the Quonset Waterfront. Railroad access to Quonset, north of Roger Williams Way, is via a spur across this major access road. Toray Plastics (located in Quonset) receives materials by railroad cars today. Even so, to date trains crossing the road have not proven to be an inconvenience to vehicular traffic. As development continues, additional train crossings of Roger Williams Way should be limited to avoid conflict with projected increases in traffic.

In the Park, the Davisville Main Railroad Line is located along the south side of Davisville Road, linking the Davisville Waterfront with the Quonset Main Line and then the Northeast Corridor. Therefore, railroad dependent industries should be located in the northern half of Commerce Park and the Davisville Waterfront. The existing automobile importing operation (NORAD) located in the Davisville Waterfront could benefit from upgraded Davisville Main Line tracks and the FRIP since bridge clearances in the Northeast Railroad Corridor will be made adequate for tri-level rail cars. NORAD then could ship some cars out of Davisville to more distant markets via rail rather than truck.

Exclusively truck-dependent industries should be located with good access to the new Route 403/Route 1 Interchange and the West Davisville exit off relocated Route 403 farther west. Accordingly, the following Park districts should be targeted for truck-dependent industries: West Davisville, the southern half of Commerce Park, Quonset, the southern section of North Davisville, and the westerly portion of the Davisville Waterfront. Executive Park, although close to the new Route 403/1 interchange, should be reserved for office using businesses, not truck-dependent industries.

The Master Plan encourages the location of innovative industries such as marine biotechnology and aquaculture at the Park. While these location decisions are based on private business objectives, these types of industries can be accommodated throughout the Park. The aquaculture industries need to be located near water at appropriate sites in the Quonset Waterfront and Kiefer Park Districts. Moreover, this Plan supports industries that attempt to conserve energy and other resources by constructing energy efficient “green buildings”. RIEDC should incorporate green design standards into its siting requirements; this issue will be addressed in the Implementation Program after adoption of this Master Plan. A discussion regarding eco-industrialism is included in Chapter 5.0 Infrastructure.

### **3.2.2 Mixed Use Development**

The mixed use development consists of offices, a hotel, restaurants, small retail and other services such as banking, copying, delivery and other business support operations. These types of uses should be located in Executive Park, acting as a transition area between the residences north of Newcomb Road and the industrial activities in the heart of the Park. Commercial uses should be incorporated into the ground floors of the office buildings, and not in freestanding shopping centers and strip plazas surrounded by surface parking lots. In Executive Park, a mixed use development is the entrance to the Park and the quality of its development will set the tone and image of the Park to prospective tenants and the community. Executive Park, with frontage on Post Road (Route 1) and adjacent to the Route 403/Route 1 interchange (under construction), will become more accessible. Since Executive Park will have a dense concentration of employees, the site should be planned in a way that maximizes its exposure to existing public transit service along Post Road and the proposed future internal shuttle bus system.

Low rise office buildings, pedestrian facilities, and a high level of urban design, architectural standards, and landscaping will create an excellent buffer between the residential neighborhood north of Newcomb Road and the remainder of the industrial park. Professional offices and research and development activities are recommended to be located elsewhere in the Park as well, but the largest concentration will be in Executive Park. RIEDC has already sited an incubator industry facility in Executive Park. Institutional uses should be located here, consistent with the Reuse Plan. Executive Park is planned to become the major activity node due to its location at the entrance to the Park and access to commercial services and transit. Commercial uses are encouraged to be located on the first

floor of office buildings convenient to the public transit service and hotel/restaurant complex along Post Road. The scale of development should consider the surrounding community and maintain the rhythm and scale already established.

### **3.2.3 Waterfront Development**

Quonset Davisville Port and Commerce Park is a landmass that projects into Narragansett Bay. Its shoreline extends from Calf Pasture Point on the north around the manmade bulkhead of Quonset State Airport to Kiefer Park on the south. The shoreline includes a wide range of natural resources and facilities not usually found in an industrial park. These include four beaches, a sheltered marine recreation area at Allen Harbor, deepwater shipping channels at the Davisville and Carrier Piers, Dogpatch Beach area in Davisville Waterfront, and water depth sufficient for barging materials manufactured at SENESCO and Electric Boat on the Quonset Waterfront. Aquaculture is an existing use in the Park at a small facility located in Quonset Waterfront.

The approach of the 2003 Master Plan towards waterfront development is different from the 2001 Master Plan. The 2001 Master Plan focused on water-dependent industrial-type activities, such as fish processing, shipping and a potential container port. The 2003 Master Plan looks to accommodate a range of waterfront uses from water-dependent industrial activities to recreation. A waterfront land use category was developed to manage these activities.

The Waterfront District is proposed to provide flexibility in the types of land uses that can be located in the district. The flexibility will allow for alternative land uses such as recreation and tourism-related activities that provided a transition between the residential areas along Newcomb Road and the industrial areas within the center of the Park.

### **3.2.4 Open Space, Recreation and Tourism Development**

Approximately 549 acres of existing open space containing wetlands and natural areas are recommended for preservation, in some cases as buffers (such as the former Nike site) between industrial districts and residential neighborhoods. Most of these areas are not connected. The largest almost contiguous natural area extends from the west end of North Davisville to the Jones Road area, including Davol Pond, to the Town's Golf Course at Roger Williams Way. This area effectively separates the Airport and the Davisville Waterfront District from Commerce Park. The very large Allen Harbor/Calf Pasture Point area effectively buffers adjacent residential areas to its north from industrial development districts.

Active recreational uses exist mainly at Town-owned facilities, the Allen Harbor Marina and the Golf Course. Both are heavily used seasonally. Future recreational and tourism facilities are in the planning stage. These include Seabee Park in Executive Park and the extensive bike path system proposed in this Master Plan throughout the Park. Seabee Park is at the site of the former Chapel in the Pines, along Newcomb Road, and includes the Seabee statue.

QDMC and RIEDC drafted a Public Access Plan in 2000 for the entire industrial park, as required by CRMC. This 2003 Master Plan revision includes a proposed modification to the plan that provides for public access to the waterfront as well as to inland portions of the site. This plan, depicted in Figure 3.4, is consistent with the 1979 Settlement Agreement regarding protection of open spaces. Approval of this public access plan will be requested of CRMC.

Three bicycle routes are proposed to link the community with park: one will be in its own right of way; the other two would be marked on roadway pavements. While these routes would primarily be

used for recreation, they also can serve commuters since they will link the two proposed transit centers with major destinations in the Park. A bike path is proposed along Newcomb and Perimeter Roads, along the north side of the site. It will connect the proposed hotel/restaurant/retail uses along Post Road and the nearby transit center in Executive Park with North Davisville, Allen Harbor, and Calf Pasture Point. The bike path will be in its own right of way within a landscaped buffer between the residential and open space areas outside the Park and the industrial park. The second bikeway would link the first bike path with the potential commuter rail station in West Davisville. It would be aligned along Devils Foot Road (marked appropriately) and would meet Post Road via a new ramp to be built as part of the Route 403 Relocation Project. The third bikeway would link North Davisville with the Kiefer Park Waterfront. The alignment would begin at the Newcomb Road bike path in North Davisville via the proposed Cross Park Road and remaining segments of Northrup Road along the golf course to Quonset Road. It would cross Quonset Road to Circuit Drive to Blue Beach in Kiefer Park. It would be marked appropriately on the pavement. For more details about the bicycle network as a shared use transportation facility (e.g., pedestrians and bicyclists), please see Chapter 4.0 Transportation.

### **3.3 Quonset State Airport**

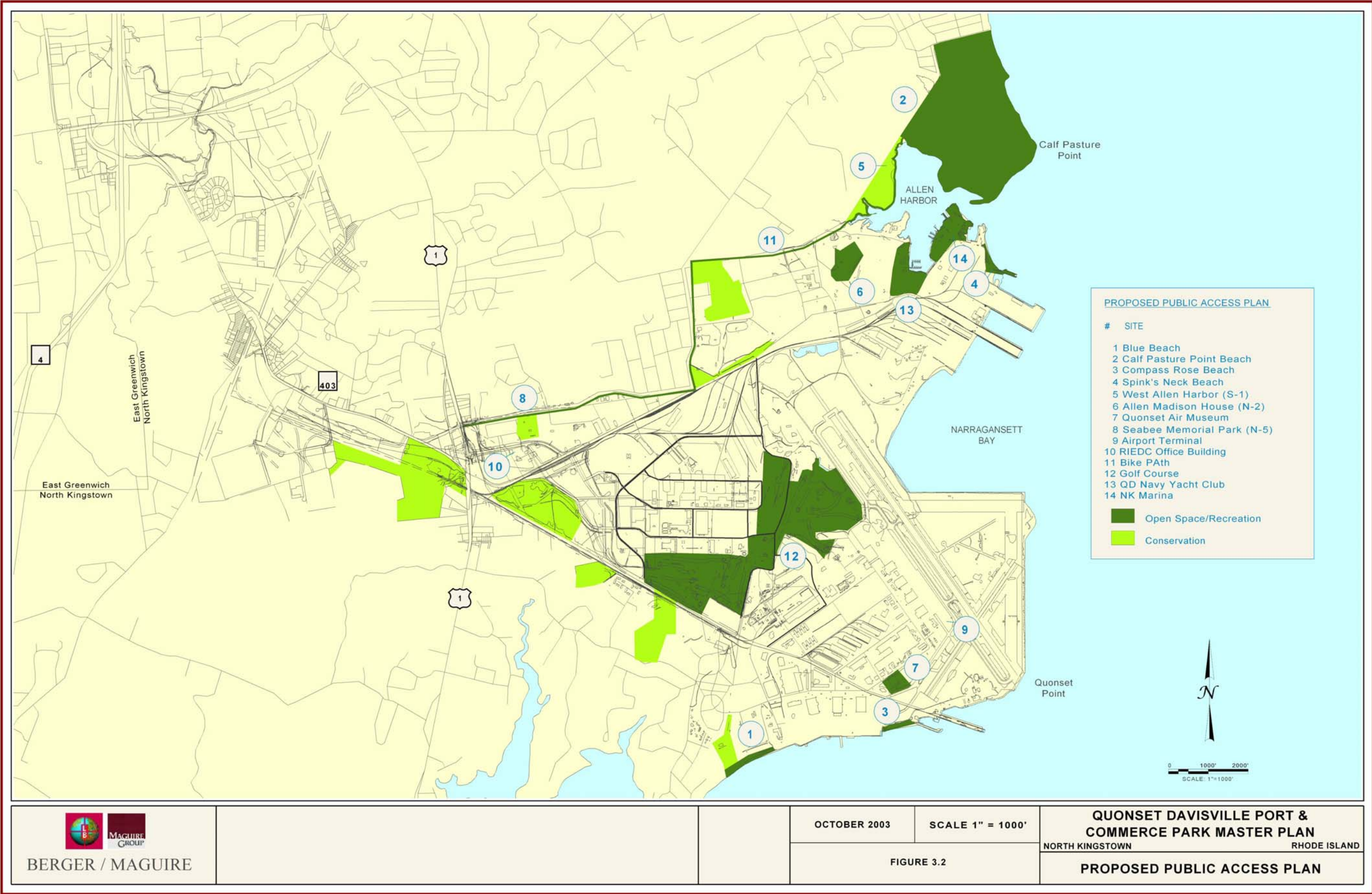
The Quonset State Airport is the largest property user at Quonset Davisville, but is not under the control of RIEDC. The land is owned by RIDOT and leased to RIAC. RIAC has hired a firm to manage the Airport, as well as the three other small State airports. RIEDC views the Airport as an asset for future business development of the Park. Corporate use of the airport is ongoing and is encouraged. The RIEDC understands that both the Rhode Island Air National Guard and the Army National Guard Air Wing will continue to be based at the Airport and will continue to use the main runway. RIEDC expects the Airport to continue to function because of its unique potential for increasing aviation-related businesses and functions at the Park.

The Airport occupies much of the waterfront shoreline, which extends east from the Davisville Waterfront District along the bulkhead that encloses land area filled by the Navy, then south to Carrier Pier. The area generally between Runway 16/34 and Runway 5/23 and the Bay is unused, contains abandoned runways along the shoreline, and has limited access from the north. There is a desire by the State to put this vacant land to productive use. RIAC will be preparing a State-wide airport system plan, including Quonset State Airport. The use of this area for airport purposes will likely be addressed by RIAC in that separate planning process. The area south of the runway intersection also is unused, but is needed for aircraft safety. Just beyond the southern limits of the Airport property are RIEDC's Wastewater Treatment Plant, Steam Plant and Carrier Pier. As of October 2001, the Airport Systems Plan is currently on hold.

RIEDC would like to assist RIAC in converting the unused airport property into job creation economic development use. The property could be used for water-dependent and water-related activities in compliance with FAA operation requirements. A major constraint to the property is road access. The only access available currently would need to cross active runways. One possible solution would be to construct a roadway from the Davisville Pier area.

### **3.4 Employment Projections**

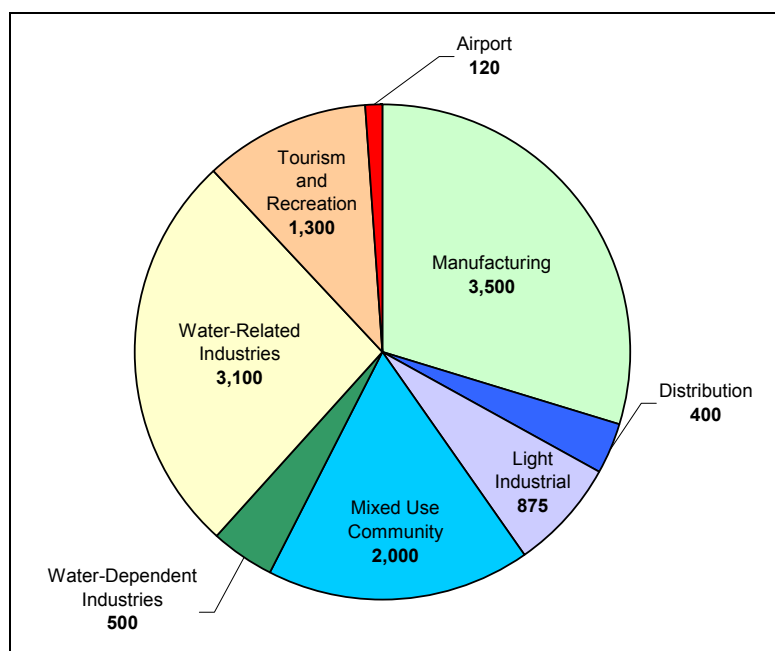
Bonz/REA, Inc., real estate economic consultants, prepared a revision of the market analysis they prepared for the 1998 Draft Master Plan. The purpose was to determine what the market support is for various employment sectors and which of them were appropriate for Quonset Davisville.



RIEDC does have the ability to be selective about the types of businesses that are allowed through its own marketing and approval processes. RIEDC can be proactive in searching out and attracting the types of businesses that it believes are beneficial to the State and the site. In reality, however, the types of businesses that RIEDC has the opportunity to “select” are fully dependent on a number of other factors including economic conditions, potential business profitability at this location, price, size and location of the available parcel(s) and suitability of access.

Potential additional employment at the Park, based on the market analysis, was revised from the 2001 Master Plan as a result of developed land since the last revision. Projections range from 11,780 to 12,000 new jobs in a wide range of industries and businesses that could be accommodated on the 678 remaining acres of available and developable land. These totals would be in addition to the 6,200 existing jobs on site, as of May 2001. Therefore, total employment at the industrial park could reach 17,980 to 18,200 by 2021, at total build-out.

The additional jobs generated by full build-out of the remaining 678 acres were allocated to eight major employment districts in the industrial park. The jobs were allocated by eight major employment categories to the appropriate districts based on the land use planning concept described above, including proximity to needed transportation facilities and compatibility with residential uses alongside the site. See Chapter 6, Table 6.2 that allocates median job projection of about 11,900 jobs by eight major employment categories that are appropriate for the site and have economic market supports, as follows:



**Figure 3-3. Projected number of jobs by major land use categories.**

The largest concentrations of manufacturing jobs would be allocated in Commerce Park, where large parcels of undeveloped land are located (See Table 6.3.) Office sector type jobs are allocated throughout the Park with a major concentration in Executive Park under the mixed use development land use. Locating these types of jobs near the entrance of the site will act as a buffer between residential uses along the north side of Newcomb Road and the heavier industrial uses elsewhere in the Park. Distribution jobs are allocated to West Davisville close to both rail and highway access. Service/retail jobs are allocated only in Executive Park under the mixed use development, compatible

with the predominant office space using jobs. Recreation and tourism-related jobs are allocated in the Davisville Waterfront District. Understandably, the districts with the highest numbers of new jobs have the most land available for development. Over 75 percent of the new jobs will be located in the following districts: Commerce Park, North Davisville, and Executive Park.

Employment density projected for the remaining 678 acres of available and developable land is higher than existing density at the Park because of expected higher intensity use of the parcels consistent with other successful industrial parks. The increase in office and service employment projected at the Park is normally developed at higher densities than manufacturing and distribution industries. Currently, employment density is low at Quonset Davisville since many occupied parcels by predominantly manufacturing and distribution industries are very large and not fully developed, to allow for expansion.

**Table 3-1. Total Employment at Quonset Davisville 2001-2021.**

			<b>Location</b>	<b>Type of Jobs</b>
Existing Employment (2001)	6,200	6,200	Quonset, Kiefer Park and Commerce Park	Largely manufacturing and distribution
Future Employment (2021) on additional acres	11,780 to 12,000	11,780 (used for planning purposes)	Commerce Park, Davisville Districts and Executive Park	Manufacturing, Distribution, mixed community, water dependent and enhanced activities.
<b>Total Jobs</b>	<b>17,980 to 18,200</b>	<b>17,980</b>	<b>N/A</b>	<b>N/A</b>

### 3.5 Consistency with Town of North Kingstown Comprehensive Plan and Zoning

RIEDC took the opportunity in the 2003 revision to address unresolved differences between the 2001 Master Plan and the Town's Comprehensive Plan and became a major component of the revision process. Both plans were closely examined to determine the consistencies, inconsistencies and gaps and resolutions were developed. The 1994 Base Reuse Plan was also part of the comparison since both the Town and RIEDC participated in its development and the Town formally adopted the plan as part of its Comprehensive Plan land use element. A table was prepared in an attempt to compare the three documents and was divided into three parts. Part A compared land use category definitions of the three plans. Part B looked at issues related to the overall management and development of the park, including land use, transportation, infrastructure, open space and recreation, buffering, natural resources, and community services and facilities. The final section, Part C, examined individual districts within the park and how each plan approaches various topics, such as those listed above. Two columns were devoted to consistencies and inconsistencies between the plans as well as comments and concerns made by the Town of North Kingstown regarding issues not specifically related to consistency, but raised during this revision process. Prior to the development of the comparison table, it was stated that all references to the container port would be eliminated. To reduce the length of the table, these references are not listed as inconsistencies between the North Kingstown Comprehensive Plan and the Quonset Davisville Master Plan. It is already understood that they will be removed from the document. Based on the comparison table, a second table was prepared that outlined recommended amendments to the 2001 Master Plan and used as a basis for the development of this document. These tables were reviewed by the RIEDC Board and staff, QDMC Board, and the Town of North Kingstown and remained working documents.

One of the major discrepancies between the plans was land use definitions. For example, the 2001 Master Plan used general terms regarding manufacturing and distribution activities while the Town specified light or general industrial uses. Terminology was also an issue, specifically the use of “transit-oriented development” (TOD) in the 2001 Master Plan. Generally a TOD includes a residential component, which is not part of the vision for the Park. The use of “intermodal” also was viewed by the Town as relating to container port development. RIEDC worked with the Town to provide better definitions of land uses and activities to ensure consistency between the 2003 Master Plan and the Town’s Comprehensive Plan. It is the intention of RIEDC to work with the Town to incorporate the 2003 Master Plan into the local comprehensive plan as a special component, eliminating the 2001 addition of the Quonset Point Davisville Element.

The overall development of Quonset Davisville Port and Commerce Park as an industrial and commercial park remains a consistent goal in both this Master Plan and the Town’s Comprehensive Plan and Zoning Ordinances. This is because the Town and QDMC staff already coordinate planning and zoning as they affect the site, including the recently instituted lot recording agreement. Further cooperation will take place in the development of future zoning for better overall land use management of the Park, such as the creation of a Quonset Davisville Overlay District in the Town’s local ordinances.

### **3.6 District Plans**

The following sections describe existing conditions and specific recommendations in each of the districts within Quonset Davisville Port and Commerce Park.

#### **3.6.1 West Davisville**

##### **Existing Conditions:**

- Boundaries are Northeast Railroad Corridor on the west, Devils Foot Road (State Route 403) on the north, Post Road (U.S. Route 1) on the east and undeveloped areas to the south.
- District includes 308 acres, is roughly triangular in shape and is separated from the rest of the Park. Only 41 acres are developed. Sixty-six (66) acres are available for development. Additional acreage was occupied temporarily by the U. S. General Services Administration (GSA) for laydown area for the adjacent Northeast Railroad Corridor Electrification Project (now completed). The remainder is undevelopable and will remain open space.
- Employment in October 2000 was approximately 200. The major employers were BB&S Treated Lumber, Johnson Brothers, Trussco, and All American Meat and Seafood.
- Access is from Devils Foot Road to the south via Mike Road and Compass Circle. Railroad access is via the Davisville Main Railroad Line that connects the Northeast Corridor to Davisville Piers and via the Quonset Main Line farther east to Quonset Point.
- Unique features include the combination of rail and highway access that can serve industries that benefit from truck or rail access, such as the existing distribution facilities located here.

### Recommendations:

- Of the 66 acres remaining to be developed, 33 acres are recommended for general industrial uses, particularly distribution industries, yielding 400 jobs and 33 acres for manufacturing industries yielding 900 jobs.
- A freight multi-modal center and a future transit center may be appropriate for West Davisville considering the following independent projects:
  1. RIDOT's Route 403 Relocation Project will provide direct expressway access to Routes 4 and then I-95 via an exit at the future West Davisville Road (east of and parallel to current Mike Street.) West Davisville Road will be the only roadway access point to the district.
  2. RIDOT's Freight Rail Improvement Project (FRIP) will provide a third railroad track for freight trains in the Northeast Corridor. This will improve access to Northeast and Midwest markets from Quonset Davisville via West Davisville.
  3. RIDOT's future extension of commuter rail southerly from Providence could eventually include a stop at West Davisville. Provision for park and ride, bus rapid transit, Park shuttle bus and bicycles should be considered. Coordination with RIPTA and RIDOT will be required.
- The scale of the future transit center will be consistent with the surrounding area and sensitive to the adjacent residences.
- Approximately 20 acres are recommended for future development of these facilities which could reduce the amount of land available for other types of industrial development.
- The freight multi-modal center site could be considered given the areas access both to Northeast Railroad Corridor and the relocated Route 403 exit at West Davisville Road. A minimum of 15 acres would be needed for new railroad spur(s) and truck parking/loading/unloading. These activities would be screened from residential uses along Devils Foot Road by such means as heavy landscaping, to be determined later when such a multi-modal center proposal advances to implementation.
- The potential future commuter rail station would require approximately 5 acres for parking, unloading/loading and circulation. A potential site for the station platforms may be on either side of a short railroad spur adjacent to the Northeast Corridor main tracks. Access to the station would be from West Davisville road to a new local street to be built within the industrial district.
- These facilities will require minor revisions to RIEDC's Redevelopment Build-out Plan map, dated June 20, 2000, which shows potential new streets and parcels.

### 3.6.2 Executive Park

#### Existing Conditions:

- Boundaries are Post Road on the west, Newcomb Road on the north and Davisville Road on the south. Post Road is developed in a strip commercial pattern, and Newcomb Road is developed as garden apartments and single family residential. This District is the entrance to the Park and has a welcome sign, RIEDC/QD Division offices, and a new daycare center.

- District includes 129 acres; approximately 54 acres are developed. Seventy-five (75) acres are available for development. The remaining acres include the following: right of way for the Route1/Route 403 Interchange under construction in 2001; 6 acres for a future Seabee Memorial Park; and the former Navy buildings that will be demolished, a bowling alley, a theatre and a gymnasium.
- RIEDC has rehabilitated Building 380, a former Navy library, for conversion to a “business incubator” facility with office and machine display space. RIEDC will lease the premises to the operator of the incubator function.
- Employment in 2000 was approximately 100 people. The major employers were RIEDC, Quonset Davisville Division Headquarters, and Sunshine Child Care Center.
- Access is via Davisville Road near the intersection with Roger Williams Way/Devils Foot Road and a ramp to Post Road. Construction began on the new Route 403/Route 1 interchange in spring 2001. The Davisville Main Railroad Line is on the opposite side of Davisville Road with no railroad spurs across the Road to Executive Park.

**Recommendations:**

- The 75 acres remaining to be developed are recommended for mixed use development uses, where office uses yield 1,300 jobs and 20 acres specifically for retail sales and services yield 700 jobs.
- The Routes 403/1 interchange will provide expressway access to both Quonset Road (formerly Roger Williams Way) and Davisville Road. Access from within Executive Park to the new interchange will be via Gate Road to Post Road (U.S. 1.) Ramp D from Post Road will provide access to Route 403 eastbound to Quonset and Commerce Park. Gate Road will connect Davisville Road and Post Road. Access to Executive Park from Quonset and Commerce Park will be via Ramp BB off Route 403 westbound above Davisville Road on a bridge to Gate Road. The RIDOT is encouraged to build all the necessary ramps, including the “deferred” ramps, as the Master Plan assumes the completion of these ramps for better access and circulation in and around the Park.
- A transit center may be located here to provide for transfers between RIPTA’s regional bus and internal shuttle buses or vans. Space is also recommended for commuter vans, taxi, bicycles, and pedestrians. Approximately 3 to 5 acres will be required for this center.
- Architectural and landscaping design standards are currently part of the Development Package, however, more elaborate standards are recommended as the Park grows in the future. Design guidelines are currently being drafted by RIEDC. The RI Statewide Planning Program recommends that these design standards be finalized, with public input, and adopted by RIEDC. The design standards can then direct Park development, which is consistent with the Ground Transportation element of the State Guide Plan relative to walkability and parking facility landscaping.
- These design standards should be rigorously applied in Executive Park since it will be the gateway to the Park. It is the most visible District from heavily traveled Post Road and abutting residential Newcomb Road. These standards will establish a strong positive and attractive image for the Park and provide for a pedestrian oriented environment.

- Open space and recreational uses are also proposed for the district. A 50-foot-wide landscaped buffer including a bike path is proposed along Newcomb Road to link the transit oriented center and the planned West Bay Bikeway along Post Road with Calf Pasture Point along the northern edge of the Park. This recommendation is included in the Base Reuse Plan and the 1998 Draft Master Plan. The bike path should be built in the first five-year period of the development program.
- Public access is provided by the bike path as well as Chapel in the Pines and the Seabee Memorial Museum.

### **3.6.3 North Davisville**

#### **Existing Conditions:**

- Boundaries are Newcomb Road on the west, abandoned Perimeter Road on the north, West Allen Harbor on the east and Davisville Road on the south.
- District includes 230 acres and is largely vacant. The former Navy Construction Equipment Department (CED) used the site. Approximately 185 acres are developable. Most of the remaining acreage will remain open space.
- Employment in 2000 was approximately 50 persons. The only employers were North Atlantic Marine Salvage, Chabot Associates, Pro Paint Plus and NORAD.
- The Town Department of Public Works Garage is located in this District.
- Access is from Davisville Road via Perimeter Road and Marine Road. The district contains deteriorating roads formerly used by the Navy.
- Unusual features include the former Nike missile site and the adjacent “Snake Pit,” an excavated site created by the US Navy during routine practices. The Allen-Madison House (eligible for listing on the National Register of Historic Places; it is on the State Register) is located on an 11-acre parcel adjacent to West Allen Harbor. The District acts as a buffer between adjacent residential uses and open space areas and the rest of the industrial park.

#### **Recommendations:**

- Recommended land uses for the 185 developable acres are light industrial and waterfront uses, as follows:
  - 20 acres for light industrial (approximately 380 jobs)
  - 165 acres for water-related industries (approximately 3,140 jobs)
- The District is suitable for temporary parking of imported automobiles, distribution and warehousing businesses in low structures. Such uses are compatible with the “light” industrial use. Building heights in the center of the district are limited to 30 to 60 feet by the approach and departure clearance surface slope (50:1) of Quonset State Airport’s Runway 16/34. The area is subject to use restrictions as a result of the Public Benefit Conveyance (PBC) via U.S. Department of Transportation, Marine Administration (MARAD.) The District will require new sewer and water facilities.

- Access to the District from Commerce Park and Quonset will be via the Cross Park Road.
- Open space and recreation uses are also recommended for this district. A 50-foot-wide buffer and bikeway is recommended along the west and north sides, providing access to the adjacent Allen Harbor and Calf Pasture Point areas. It should be built during the first five years of the development program. This bike path is consistent with the Reuse Plan and 1998 Draft Master Plan. A roughly 16-acre wedge shaped woodland along the north side of Davisville Avenue and a 26-acre woodland area (former Nike site) in the northwest corner are reserved for conservation.
- The Master Plan supports the preservation of the Allen Madison House. The RIEDC will investigate opportunities for reuse that may include a bicycle refreshment center or a historic information center. Access to the house will be provided by the RIEDC in support of its use as a public access point.
- Conservation areas within the district are along Perimeter and Davisville Roads (N-3 and N-4, respectively). N-3 consists of two large woodland parcels in the northwest corner of North Davisville. This area acts as a buffer between residential areas and Park activities. Many of the trees are large oaks and hickories with a stand of large white pines. N-4 contains an important shrub community adjacent to Davisville Road that was a part of a reforestation effort in Quonset years ago. It extends over a half mile and acts as a buffer to activities behind it.
- RIEDC will work with the Town to provide access to Allen Madison House and Calf Pasture Point.

#### **3.6.4 Allen Harbor and Calf Pasture Point**

##### **Existing Conditions:**

- The US Navy transferred Calf Pasture Point and Allen Harbor Landfill to the Town of North Kingstown.
- Boundaries include North Davisville on the west, Perimeter Road (closed) on the northwest, the Mountview residential neighborhood on the northeast, and the Davisville Waterfront on the southeast.
- District includes 289 acres--the 91-acre Allen Harbor area, a heavily wooded section that encloses a protected harbor supporting two marinas for small recreational boats with access to Narragansett Bay; and the 198-acre Calf Pasture Point, a largely undeveloped beach and conservation area. The 49-acre West Allen Harbor area, according to the lease to the Town of North Kingstown, includes a wetland and 4,500 feet of shoreline.
- The former Allen Harbor Landfill has been capped and remediated by the U.S. Navy.
- Employment in 2000 was approximately 4. The major employers were:
  1. Town's Allen Harbor Marina and Recreation Area
  2. Allen Harbor Boating Association (at former Navy Yacht Club)
- The Cecil Group, Inc. and Parsons Brinckerhoff Quade and Douglas, Inc. prepared the Master Plan for the District. The Town adopted it in 2000 and the Office of Statewide Planning

approved it in July 2001, as an amendment to the Town's Comprehensive Plan. This District Plan is supported and incorporated into this Master Plan by reference. Recommended land uses are waterfront, open space and recreation.

- Based on the Allen Harbor Calf Pasture Point Master Plan, the Town has implemented several components including:
  1. Added of 5 new moorings to the harbor.
  2. Replaced several hundred feet of existing docks.
  3. Hired Docko Incorporated to design specifications for a sewer line extension from the RIEDC Wastewater Treatment Facility at the marina and a master plan for the parking area adjacent to the marina.
  4. Hired Brian Kent Associated to complete a master plan for the trail system on Calf Pasture Point, which should be completed by Fall 2003. The master plan will include the trail system and recommendations for interpretive signage, locations of restrooms, kayak launches, and benches as well as habitat management and invasive species management programs.

#### **Recommendations:**

- Waterfront and open space and recreation land uses are recommended for this district.
- At Allen Harbor, 50 acres of the 91-acre area may be transferred to the Town for continued use as open space and marinas. The Town of North Kingstown's Master Plan for Allen Harbor and Calf Pasture Point proposes that a portion of West Allen Harbor be developed for some commercial development, including a waterfront restaurant. The 189-acre Calf Pasture Point district will remain as conservation lands with limited development. The Reuse Plan recommended recreation and open space uses for these two areas.
- Future employment is estimated at approximately 40 jobs.
- Conservation areas will be maintained in the district. West Allen Harbor contains a tidal creek inlet bordered by a large expanse of salt marsh and tidal mud flats. Calf Pasture Point Beach is more than a half mile along Narragansett Bay with several inlets that feed small patches of salt marsh and brackish water. Calf Pasture Point is accesses by the proposed bike path the runs along the northern edge of the Park from Executive Park.

#### **3.6.5 Davisville Waterfront**

##### **Existing Conditions:**

- Boundaries are Narragansett Bay on the north and east, Quonset State Airport and an open space area containing Davol Pond on the south and Davisville Road on the northwest. The 1,500 feet long Spinks Beach is located along the northeast boundary. The District includes Little Allen Harbor, a small bay east of Allen Harbor, and Fry's Cove, a fishery.
- District includes 269 acres in two distinct areas referred to as Davisville Piers and the Pier Support Area in the Base Reuse Plan. Davisville Piers is the northerly section and comprises 101 acres of waterfront area. The Pier Support Area is located to the south of the Davisville Piers.
- Employment in 2000 was over 250. The major employers were:

1. NORAD, auto importers  
NORAD has operated an active automobile importing business at the Davisville Piers since 1985. The following numbers indicate the level of activity at the piers in recent years. Between 1997 and 2000, NORAD processed approximately 87,000 Volkswagens and Subarus (nearly 22,000 a year) delivered by 70 ships (over 17 ships a year.) In 2000, 15 ships carrying nearly 12,000 cars were processed at the site; nearly 26,000 cars were trucked. This volume is slightly less than in 1997 when 33 ships carried over 15,000 cars. During the same year nearly 18,000 cars were trucked to and from the site.
  2. Sea Freeze, a fish processing company  
Three fish processors work at the Davisville Waterfront. Seafreeze processed over 20.6 million pounds of fish in 2000, down from over 30 million pounds processed in 1997. Aran Fish processed 20.7 million pounds of fish in 2000 and transported them in 545 trucks. Aran's volume is up from 18.2 million pounds in 1997. Providian/Ocean Spray processed 3.6 million pounds of fish in 2000, using 96 trucks.
  3. RI Beverage (in the Pier Support area)
  4. Amtrol (warehouse for water heating units)
- Access to the Piers area is via Davisville Road. Access to the small industries located along Little Allen Harbor, north of the piers area, is via Patrol Road. The Davisville Main Railroad Line terminates at the piers.
  - The 168-acre Pier Support Area includes Dogpatch Beach, seven vacant houses formerly used as military quarters and a wetland. Access is via Davisville Road to Thompson Road and Thorpe Street. There are railroad spurs in the northern section near the Davisville Main Railroad Line.

#### Recommendations:

- The Pier Support Area is subject to use restrictions as a result of the Public Benefit Conveyance from U.S. Maritime Administration. Under the deed from the US Government to RIEDC, RIEDC is restricted to only use the area for the development and operation of a port facility, as defined in the deed. In order for RIEDC to pursue land use concepts that propose water-enhanced or tourism activities not associated with port development and operations, RIEDC must obtain written consent from the US Maritime Administration.
- Alternative activities to be considered are waterfront, open space and recreation land uses. Two scenarios are proposed. The first emphasizes water-dependent and tourism and recreational uses and the second emphasizes water-dependent and water-enhanced uses:
  1. Continuation of existing uses at the Piers (i.e., auto importing, exporting, and temporary parking and seafood transporting and processing.)
  2. New industrial and office uses, including those that are water dependent, are recommended for the 109 available and developable acres between the Piers and the Airport, as follows:
    - SCENARIO 1 (addition of water-dependent and water-enhanced activities, similar to existing)
      - 49 acres for water-dependent uses, 510 jobs
      - 60 acres for water-enhanced uses, 1,140 jobs
    - SCENARIO 2 (water-dependent and tourism and recreational uses)
      - 49 acres for water-dependent uses, 510 jobs
      - 60 acres for tourism and recreational uses, 1,300 jobs

- Alternative uses that do not require waterfront access should be sited away from the waterfront and closer to Davisville Road to be consistent with the following policy in the State Guide Plan's Industrial Land Use Plan:  
"B.13 Encourage new industrial development in the coastal zone that places priority on the maximum efficient and appropriate utilization of existing marine infrastructure, such as the Port of Providence and Quonset Davisville."
- The upland areas of Fry's Cove should be reserved for water-related and water-enhanced uses. Thirty-five acres of this area are adjacent to Runway 16/34 and part of the airport property. Aviation related uses should be considered in conjunction with RIAC.
- Additional public access to the shore and open space is identified at Spink's Neck Beach. A proposed conservation area is located south of the Piers and includes Dogpatch Beach. A small stream flows through dense woodland and shrub thickets, offering substantial wildlife cover and is particularly valuable to small mammals and songbirds.

### **3.6.6 Airport District**

#### **Existing Conditions:**

- Quonset State Airport boundaries include: wetlands such as Davol Pond south of Jones Road on the northwest; Davisville Waterfront District on the north; Narragansett Bay on the east and south; and Airport Road and on the southwest. The RIEDC Steam Plant (slated to be closed in 2002) and Wastewater Treatment Facility are located south of the Airport.
- The Airport occupies 538 acres, the largest single user at Quonset Davisville with almost 18 percent of the land area. Much of this land was created by fill by the Navy during World War II.
- There are two active runways 16/34 – 7,000 feet long and 5/23 - 4,000 feet long. The longer runway is the longest in the State. Runway 16 has instrument landing system, and there is a control tower. Other runways next to the Bay are abandoned. There are approximately 17,000 flights a year, split evenly between the Military (Army and Air National Guard Units) and general aviation (GA). The annual late June, two-day weekend Quonset Air Show has attracted up to 140,000 spectators, depending on flying conditions.
- Access to the terminal building is via Eccleston Avenue from Roger Williams Way. The Quonset Air Museum is on Airport property on Eccleston Avenue near Roger Williams Way.
- General Aviation hangar buildings were installed in 1998, east of the terminal building. The Rhode Island Airport Corporation (RIAC), operator of the airport, began preparation of a State Airport System Plan in spring 2000. The System Plan includes Quonset State Airport.
- Employment at the Airport was approximately 10 in 2000.
- The Airport District also includes the Rhode Island Air and Army National Guard facilities located near Belver Avenue and Cripe Street.

**Recommendations:**

- The use of Quonset State Airport land is currently under the jurisdiction of RIAC. However, use of the Airport by corporate aircraft is considered a benefit to the industrial park because of the unique asset such use would provide to certain classes of business. Its continued use for this business purpose is strongly recommended.
- RIEDC is discussing with RIAC the use of the underutilized airport property. RIEDC believes that the large size of the eastern end of the airport property could be used for airport support or transportation-related activities such as a ferry terminal. In order to use this property, a new access road would need to be constructed from the Davisville Waterfront District.
- Military and other GA activities, including recreational flying, in contrast, have a neutral effect on private business development purposes at the remainder of the industrial park. There are few spin-off benefits for industrial development. Nevertheless, these uses are assumed to remain for Master Plan purposes.
- Access to the airport will remain the same, via Eccleston Avenue from Quonset Road. An alternative access point from the north will be from the new proposed Cross Park Road via the alignment of present Cripe Street, if straightened.
- Employment at the Airport is projected to increase to approximately 40 persons.
- The Master Plan accommodates expansion of the RIANG in the parcel across Belver Avenue from its main headquarters.
- Public access is proposed to the airport terminal.

**3.6.7 Commerce Park****Existing Conditions:**

- Boundaries include Davisville Main Railroad and Davisville Road on the north, natural areas on the east, the Town Golf Course on the south, and the right of way for the new Route 403/Route 1 interchange, currently under construction, and Roger Williams Way on the west.
- District includes 447 acres, of which 99 acres are developed. Some 85 acres are vacant and developable.
- Employment in 2000 was over 1,300. The major employers were:
  1. Ocean State Job Lot (warehousing/distribution)
  2. New England Stone (heavy industrial)
  3. Stanley Bostich (warehousing)
  4. ICON International
- Concepts Warehouse built a new building and Ocean State Job Lot will construct a large distribution and corporate office facility.
- Access is from Roger Williams Way via Commerce Park Road. Commerce Park Road was constructed as recommended in the 1998 Draft Master Plan. The new road connects the District

businesses to both Roger Williams Way and Davisville Road. Railroad access is from the Davisville Main; one spur track services Star Gas Company.

- Unique assets include the largest amount of available, sewerage land in the Park, suitable for tenants requiring large parcels.

**Recommendations:**

- General industrial uses are recommended for this district, specifically rail-dependent industrial uses at the northern half of the District near the Davisville Main Line, where rail spur connections also could be accommodated.
- Truck dependent uses are recommended for the southern half, because rail access to the southern half of Commerce Park would require crossings of internal roads. Railroad and vehicular access should be separated throughout the industrial park, to the extent possible.
- The District should be reserved for large site users, as follows:
  - 85 acres for manufacturing (2,300 jobs)
- The distribution industries should be located near the rail and roadway access facilities in the northern part of the district. The manufacturing industries should be located in the southern half. The office/services businesses should be located along the western edge of the district, maximizing corporate visibility and exposure to and from the new relocated Route 403 interchange approach roadway, now under construction.
- Primary access would be from Quonset Road on the south via the new Commerce Park Road [formerly Koster Road]. Additional access would be from Davisville Road on the west via the new Cross Park Road. Internal local roadways would connect to Cross Park Road. Commerce Park Road separates the rail-dependent from truck-dependent uses.

### **3.6.8 Golf Course**

**Existing Conditions:**

- Boundaries include Commerce Park on the north, the Airport on the east, Quonset Point on the east and Roger Williams Way on the south.
- The 138-acre 18-hole Town-owned golf course separates the Davisville and Quonset segments of the industrial park. It is the major recreational and inland aesthetic feature. The Navy initially developed it and it is heavily used.
- Northrup Road crosses the golf course in the center and provides access to Cripe Street, a circuitous roadway leading to Quonset Point and to Lt. James Brown Way. The latter leads to the "O" Club (an independent banquet facility) overlooking Fry's Cove. Carter's 19th Hole Restaurant on Callahan Road west of Northrup Road functions as the clubhouse for the course. The Town constructed a new facility in May 1998, which serves as an eating establishment.

**Recommendations:**

- Proposed roadway improvements may affect the golf course, requiring some reconfigurations. Cross Park Road, proposed to connect the Davisville and Quonset segments of the Park, would cross the golf course near existing Cripe Street. The alignment would continue to Quonset. Accordingly, access to the Golf Course, the Club House and the “O” Club would be significantly improved.
- To eliminate potential conflicts, a bridge for golfer access would be constructed across Cross Park Road. Portions of one green, one tee and one fairway may be affected. Any impacts to the golf course and alternative alignments would be thoroughly investigated and mitigated as part of the design process.
- The existing access drive to the “O” Club, James Brown Road, would intersect with the new Cross Park Road rather than what is now Cripe Street. The banquet facility is unaffected by the Master Plan, while access to it would be vastly improved.

**3.6.9 Quonset****Existing Conditions:**

- The Quonset District is bordered on the northwest by the golf course, on the east by the airport, and on the southwest by Roger Williams Way.
- The District is the most fully developed section in the Park. Approximately 242 acres are developed and occupied.
- Employment in 2000 was approximately 2,500. Major employers include Toray Plastics, Electric Boat Division of General Dynamics. Several smaller users (e.g., H.H. Brown, Concepts Warehouse, and Macro Display) occupy former military buildings.
- The Air and Army National Guards occupy additional parcels adjacent to the golf course and the Airport. In addition, the area includes the Quonset Air Museum on Eccleston Avenue. At the east end of the District, beyond Runway 5/23, is the RIEDC Wastewater Treatment Facility and Steam Plant, occupying an additional 15 acres. The Steam Plant closed in 2002. This District formerly housed the U.S. Naval Air Station and Naval Air Rework Facility at Quonset Point.

**Recommendations:**

- The Quonset District has 12 acres of land available for development, recommended are general industrial uses, as follows:
  - 12 acres for manufacturing (325 jobs)
- Aviation related uses such as small aircraft manufacturing and aircraft repair should be located on the parcels closest to the Airport.
- Rail access is possible but would have to cross Quonset Road as the railroad track spur into the Toray property does at present. It is anticipated, however, that truck-dependent users would predominate with direct access to Quonset Road and Cross Park Road.

- The Quonset Air Museum will continue to be a tourist attraction and a point of public access.

### **3.6.10 Quonset Waterfront**

It is anticipated that the existing uses will remain in Quonset Waterfront District, including the RIEDC Wastewater Treatment Plant, the RIEDC Steam Plant (closed in 2002), SENESCO and Electric Boat.

#### **Existing Conditions:**

- The District covers 127 acres and is located between Carrier Pier, Kiefer Park, Roger Williams Way and Narragansett Bay. The hanger structures on the site are very large, tall and visible for miles, including from north Jamestown and the Jamestown Bridge. The primary user of the site is Electric Boat, a defense contractor that manufactures submarine parts. SENESCO, a recent new user, and a small aquaculture industry are located here as well. Railroad tracks are located alongside Roger Williams Way.
- The 800-foot-long Compass Rose Beach is located between SENESCO and the Carrier Pier, and is included in the Proposed Public Access Plan with improved access and parking.
- Since June 2003, the Vineyard Fast Ferry has been operating a ferry service from Quonset to Oak Bluffs in Martha's Vineyard. The high speed ferry service reaches the island in about 90 minutes.

#### **Recommendations:**

- Waterfront uses are recommended. The future of the Quonset Waterfront District depends largely on Electric Boat, the largest single employer at the Park, which is primarily dependent on U.S. Department of Defense contracts for submarine construction. Its continued operations at Quonset should be encouraged.
- Other waterfront and rail dependent industries would find the developable vacant areas attractive. The District has similar characteristics as the Davisville Waterfront district (available rail, roadway and direct access to the water).
- Aquaculture uses are appropriate for the Quonset Waterfront as water type is designated number 6 by the Coastal Resources Management Council (CRMC) and the State's Department of Environmental Management (RIDEM) rates water quality SB.
- Public access is proposed at Compass Rose Beach.

### **3.6.11 Kiefer Park**

#### **Existing Conditions:**

- Boundaries are Roger Williams Way on the north, Quonset Waterfront District on the east, Narragansett Bay on the south and the Shore Acres residential area on the west.
- The 154-acre District includes undeveloped area, open space, a former US Navy salvage yard and developed industrial sites. Part of the site was formerly used for military housing.

- Access is via curved Circuit Drive that connects to Roger Williams Way and Burlingham Avenue.
- New utilities have facilitated the development of approximately 74 acres for light industrial uses in a modern, attractive campus setting. The area has established a new development quality standard for the Park.
- In December 1997, Arch Chemicals (formerly known as Olin Microelectronic Materials, Inc.) and Kennedy, Inc. were the only firms in Kiefer Park. Since then, EWAG Corporation, Supfina Machine Company, Inc., Meister Grinding Technologies Corporation and Durant Tool Company have constructed new buildings. Twenty-six acres remain to be developed, as of October 2003.

**Recommendations:**

- The remaining 26 acres of vacant land and available land in Kiefer Park is recommended to be light industrial land uses, as follows:
  - 26 acres for light manufacturing (495 jobs)
- Non water-dependent industries are being sited in Kiefer Park under light industrial because of the Class A industrial environment that has been created at Kiefer Park. Ideally, and if feasible, water dependent industries such as aquaculture should be located near the waterfront, consistent with RIDEM comments on the Master Plan.
- The short road between Circuit Road and the residential area to the west and Camp Avenue should remain open, as long as local and industrial traffic do not conflict in the future.
- Kiefer Park has two natural features that are recommended for conservation in the Public Access Plan, the 700-foot-long Blue Beach and the adjacent 11-acre wetland.
- Public access is proposed at Blue Beach.
- The Kiefer Wetland is proposed as conservation area. It is a three-acre salt marsh bordered on three sides by a densely wooded fringe, which isolates it visually from adjacent development and helps retard bank erosion. A culvert within the woods allows freshwater to enter the marsh. To the south, the marsh is separated from Narragansett Bay by a small beach with sand dunes.

## 4.0 Transportation

This chapter describes the transportation plan for Quonset Davisville Port and Commerce Park. It is important since the transportation plan binds together the disparate districts in this large 3,000-acre site with a network of roadways and railroad lines intended to serve the existing and proposed land uses in the Park. The transportation and land use plans have been integrated to provide for a well functioning industrial park. Moreover, the Park's internal transportation facilities are planned also to benefit from new roadway and railroad improvements being constructed outside the site by the Rhode Island Department of Transportation (RIDOT). Accordingly, the future employment level and travel characteristics have been planned to remain within the capacities of these improvements so as to not adversely affect the surrounding community and the Master Plan assumes that all the planned ramps will be built.

The transportation plan includes recommendations for the following: the roadway system; a future transit system including buses, commuter rail, and water ferries; a bicycle path system; and improvements to the railroads. It does not include recommendations for the Quonset State Airport, since RIEDC has no jurisdiction over it, but the separate planning process for the Airport is discussed. It does not include recommendations for changes to the marine facilities at the Davisville Waterfront or the Carrier Pier since functional and structural evaluations of these facilities are not part of the scope of the Master Plan. The plan also forecasts the future traffic projections for the full build-out of the site, based on the market analysis and the land use plan.

### 4.1 Hierarchical Roadway System

A hierarchical roadway system, as proposed in the 1998 Draft Master Plan, is a systematic approach proposed to provide some logic to the circulation system and improve way finding, particularly within districts. Roadway hierarchy classifications include arterials, collectors, and local streets. The intent of the hierarchical roadway network is to identify the logical circulation of roadways by name definition. "Roads" function as arterial roadways between the region and the site and within the site. Three arterial roadways are proposed for such classification: Davisville Road, Quonset Road and Cross Park Road. These three roads provide for the Park's internal circulation system. "Roads" also function as collector roadways between arterials and local streets, within defined industrial districts. For example, Commerce Park Road in that district will connect with two arterial roads, Quonset Road and Cross Park Road. Another example of a connector road is North Davisville Road, which will connect interior parcels in that district with Davisville Road. "Streets" function as local access roadways between businesses and collector roads and they should not connect directly with an arterial road. Examples of local streets include Executive Park Street and Compass Circle in West Davisville.

The above classification system should be used when naming new roadways. The current roadway network and naming is random and not systematic. Ideally, all roadways would be renamed to follow the hierarchy of the roadway system. However, it may not be realistic to expect the names of existing roadways to be changed due solely by the recommendations of the Master Plan. RIEDC should involve affected businesses and the Town of North Kingstown when renaming roadways. Ultimately, the integrity of the street classifications should be consistent with the Master Plan, regardless of the street names. It is important to identify the various roadway types and user functions for the roadways and to preserve the roadway hierarchy within the Park.

### Circulation Pattern among the Districts

The following is a description of how one would travel among the eight industrial development districts within the Park when all the recommended roads and the Route 403 Project are completed. While the new Route 403/Route 1 interchange would greatly assist Park traffic to access Route 1, Route 4 and the regional roadway network in 2006, it would complicate, somewhat, inter-Park access. Cross Park Road would consist of improvements to Jones and Northrup Roads and Cripe Street.

- West Davisville employees (and visitors) would access the district via the new Relocated Route 403 expressway. Access would be from both Routes 1 and 4. They would leave the expressway at the West Davisville Road exit to enter the district. Existing and new local streets within the district would provide access to their job locations. To access the rest of the Park, they would use West Davisville Road to access the entrance ramp to the new expressway that would take them to Davisville Road and Quonset Road (Roger Williams Way) freely with no traffic signals.
- Executive Park employees and visitors would access the district from Route 1 at Gate Road and from the west on the Route 403 expressway at Gate Road; both of these intersections would be signalized. Gate Road leads to the local streets within the district. To access districts off Quonset Road, traffic would have to use Route 1 southbound to a new on ramp to Route 403 eastbound. To access Commerce Park, they would make a left turn at Commerce Park Road (at the location of the existing Koster Road that would be displaced.) To access Quonset, Quonset Waterfront and Kiefer Park, traffic would continue eastbound on Quonset Road. Access to the Davisville districts would be via the new signalized Gate Road/Davisville Road intersection.
- Employees in North Davisville would access the Park via the new Route 1/Route 403 interchange and continue northeast on Davisville Road to North Davisville Road, next to the new Town of North Kingstown Public Works Yard. To access Commerce Park and the Quonset districts, employees would use North Davisville Road to access Cross Park Road.
- Employees in Davisville Waterfront would access the district the same as above, except they would continue farther northeast on Davisville Road. (Allen Harbor users would use the same route.) As future development warrants, a new Seaport Road (aligned opposite North Davisville Road at Davisville Road to make a simple cross intersection) would serve the southwestern half of the district. Employees and visitors would access the Commerce Park and the Quonset districts via North Davisville Road to Cross Park Road. As an option, they could return to Route 1 via Gate Road to access Quonset Road eastbound, but this would be more circuitous. To access West Davisville, traffic would simply use Davisville Road westbound to Route 403 westbound.
- Employees in Commerce Park would access the district from Quonset Road via the new Routes 403/1 interchange at Commerce Park Road. From Davisville Road they would use North Davisville Road to Cross Park Road. Golf Course users would use the same route.
- Employees in Quonset, Quonset Waterfront, Kiefer Park and the Airport would use the Routes 403/1 interchange to access Quonset Road eastbound. To access Executive Park, traffic would use Quonset Road westbound to the off ramp to Gate Road. Traffic also could use Gate Road to access Davisville Road to access North Davisville, Davisville Waterfront and Allen Harbor. To access these same districts, traffic could use Cross Park, North Davisville and Davisville Roads. Kiefer Park workers could also use Quonset Road to Commerce Park Road to Cross Park Road to access the northeasterly districts.

- Employees in the eastern area of the airport would access that parcel by traveling through Davisville Waterfront to a newly constructed roadway along the eastern boundary of Runway 16/34.

## 4.2 Traffic

Traffic projections are necessary to plan the capacity of the future roadway system in the Park. In this Master Plan, these projections are based on traffic counts taken by RIDOT in June 2001 at locations within the Park specified by Parsons Brinckerhoff Quade and Douglas, Inc. (PB). These counts have been used for modeling the future traffic generated by full build-out of the Park in 2021. The counts were taken on Roger Williams Way, Davisville Road, Koster Road, and Wilcox Road. Directional count data were not provided by RIDOT. Therefore, traffic distribution and forecasts reflect an estimated proportional split of the incoming and outgoing traffic volumes.

Traffic impact analysis on the roadway network outside the Park is not in the scope of work for this Master Plan. However, the Final Environmental Impact Statement (FEIS) prepared by RIDOT in 1996 for the Route 403 Project has been reviewed to determine if Park-generated traffic will be accommodated by the design capacity of the Route 403 Project as analyzed in the EIS.

In order to assign traffic to the major circulation system, the site has been divided into five traffic zones, which are consistent with the 1998 Draft Master Plan and the 2001 Master Plan (Figure 4.1).

- Zone A: Quonset Park and Waterfront, and Kiefer Park
- Zone B: Davisville, including Executive Park and North Davisville
- Zone C: West Davisville
- Zone D: Commerce Park
- Zone E: Davisville Waterfront and eastern parcel in Airport

The traffic zones are based on their access to the existing roadway network and likely site circulation. Zones A and D use Quonset Road, 11 percent of Zone B traffic exits or enters the site from Quonset Avenue, the remaining 89 percent of Zone B traffic uses Davisville Road. In addition, Zone E uses Davisville Road. Zone C, West Davisville, is not included in the site circulation area since it is isolated from the Park's main roadway network, but traffic would affect the proposed West Davisville Road to Route 403. West Davisville district traffic is not expected to use Devils Foot Road or Davisville Road to the west upon full completion of the Route 403 Project by RIDOT.

The existing count data are consistent with the existing land uses within the Park. Approximately 70 percent of development is located within Zone A. Roger Williams Way carries almost 75 percent of the vehicle trips into and out of the Park.

**Table 4-1. 2001 Traffic Count Data (Source: RIDOT, June 2001).**

<b>Count Location</b>	<b>ADT*</b>
Koster Road	4,080**
Roger Williams Way, east	8,100
Roger Williams Way, west	10,500
Wilcox Road	900
Davisville Road	2,800

\* Average Daily Traffic

\*\* Koster Road volumes have not been corrected for multiple axles

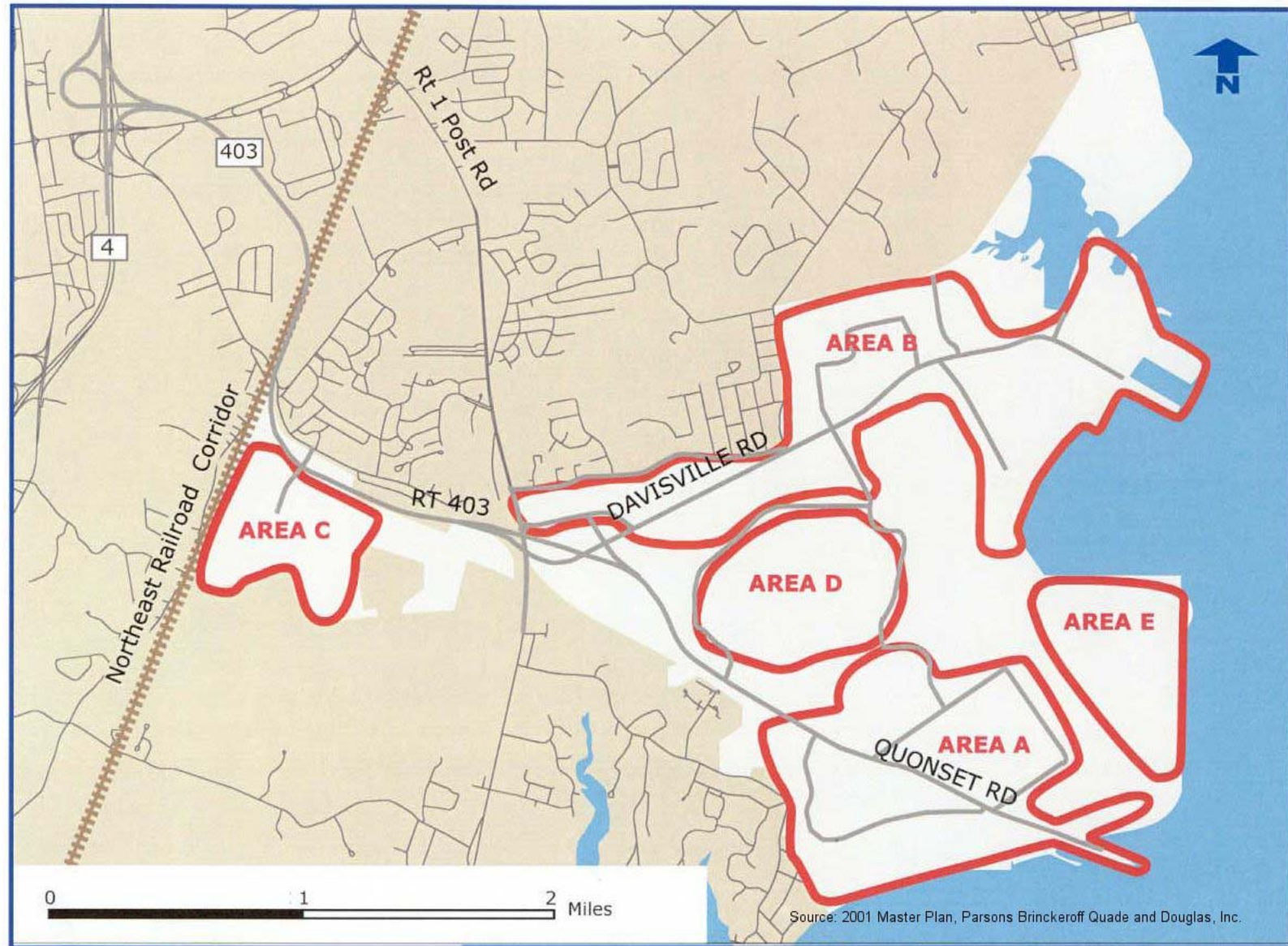


Figure 4-1. Traffic Zones.

### 4.2.1 Truck Counts

In addition to the traffic counts taken by RIDOT, RIEDC staff counted the number of trucks using Roger Williams Way and Davisville Road between 7am and 9am on Tuesday, June 26, 2001. On Thursday, June 28<sup>th</sup> counts were collected between 11am and 1pm and between 3pm and 5pm. These truck counts have been compared to the total vehicle traffic count data collected by RIDOT from June 27<sup>th</sup> through June 29<sup>th</sup>, 2001.

Table 4.2 displays the results of these truck counts. The percentage of trucks using Davisville Road is nearly twice that of trucks using Roger Williams Way. However, the total volumes of trucks on Roger Williams Way and Davisville road are both in the range between 100 and 200 trucks per two-hour count period. The percentage of trucks on the roadway is consistent with the land use pattern at the Park and the distribution industries located there.

Moreover, trucks at 13 percent of total traffic (See Table 4.2) are expected to have no significant impact on the level of service (LOS) on either Davisville Road or Roger Williams Way. Based on ITE's *Traffic Engineering Handbook, 1992*, a typical "rural arterial" consists of 9.8 percent trucks. Further, an analysis using the Highway Capacity Software verifies that 13 percent truck composition on Roger Williams Way and Davisville Road will not significantly impact the roadways more than a 9.8 percent truck composition on either roadway.

**Table 4-2. Truck Counts on Major Roads at Quonset Davisville.**

<b>Roger Williams Way</b>	<b>trucks</b>	<b>cars</b>	<b>total vehicles</b>	<b>% trucks</b>
7am to 9 am	126	1,263	1,389	9.1%
11am to 1pm	178	1,163	1,341	13.3%
3pm to 5pm	103	1,693	1,796	5.7%

<b>Davisville Road</b>	<b>trucks</b>	<b>cars</b>	<b>total vehicles</b>	<b>% trucks</b>
7am to 9 am	111	449	560	19.8%
11am to 1pm	111	429	540	20.5%
3pm to 5pm	81	531	612	13.2%

Source: RIDOT and RIEDC count data

In 2021, the two roadways will equally share the traffic generated by the employees and based on the land use pattern. To be consistent with the traffic analysis used in the trip generation analysis, it has been assumed that the truck distribution in the future will mirror the traffic distribution on the roadways.

**Table 4-3. Proportion of Trucks to Total Traffic.**

<b>Combined Roadways</b>	<b>Average Hourly Truck Percentage</b>
<b>AM</b>	13%
<b>Noon</b>	15%
<b>PM</b>	8%

Source: RIEDC count data

The average hourly truck percentages were applied to the traffic volumes from the total trips calculated for the industrial park. In the future, both Roger Williams Way and Davisville Road will have approximately 300 truck trips in the AM peak hour. Each roadway will have approximately 200 truck trips during the PM peak hour.

**Table 4-4. Total Traffic on Major Roadways During Peak Hours.**

	<b>Roger Williams Way</b>	<b>Davisville Road</b>	<b>Industrial Park*</b>
<b>AM Peak Hour</b>			
<b>Cars</b>	1,660	1,686	3,346
<b>Trucks (13%)</b>	248	252	500
<b>Total</b>	1,908	1,938	3,846
<b>PM Peak Hour</b>			
<b>Cars</b>	1,755	1,783	3,538
<b>Trucks (8%)</b>	153	155	308
<b>Total</b>	1,908	1,938	3,846

\* Does not include Zone C, West Davisville Trips

The proposed freight multi-modal center in West Davisville could help to reduce the number of truck trips entering the site. Freight could reach the site via rail rather than truck if rail access to the site were improved. Such a facility would help to mitigate the effects of truck traffic on the roadways within the industrial park and outside. It is expected that such a center would become feasible when demand increases from the Park's developing logistics or distribution industries and after both the Freight Rail Improvement Project and the Route 403 Project are fully completed by RIDOT. Upon completion of the latter project, rail/truck center traffic would not be expected to use either Devils Foot Road or Davisville Road (between Amtrak and Route 4.)

#### **4.2.2 Trip Generation Rates**

The future traffic generation model is based on the existing traffic volumes, the existing land use breakdown by employee, and rates from "*Trip Generation*" a reference published by the Institute of Transportation Engineers (ITE.) Due to the unique traffic characteristics of the Quonset Davisville Port and Commerce Park, standard ITE Trip Generation Rates did not correlate to the existing known traffic data. New Trip Generation rates for the industrial park were determined based upon the relationship between existing traffic counts and the existing number of employees in various land uses. The New Generation Rates were then applied to the number of forecasted employees for the future build out of the site.

The two roadways providing access into the industrial park are Roger Williams Way and Davisville Road. The traffic volumes on these two roadways reflect total access to and from the site have been used to identify the general traffic characteristics of the site. The traffic volumes on the interior roads have been used to confirm the consistency of the data.

PB conducted a comparative analysis of the ITE rates and the roadway traffic counts to identify similarities or differences. As shown in Table 4.5, using the ITE Trip Generation rates, the total average daily traffic (ADT) (i.e., number of trips) for 6,077 employees of various land uses is approximately 26,803 trips; however, the 2001 traffic counts indicate that the sum total ADT for 6,077 employees is only 14,195 trips. The comparative analysis indicates that the ITE Rate for ADT is 189 percent higher than actual traffic count rate. The morning peak hour ITE rates are 216 percent higher than actual traffic counts and the afternoon peak hour ITE rates are 256 percent higher than the actual traffic counts. Therefore, one can deduce that there is a unique travel characteristic for the type of development at the Park does not conform to ITE national standards.

**Table 4-5. Distributed Site Traffic: Actual vs. ITE Trip Generation Rates (Existing land uses).**

	<b>2001 Count Data</b>	<b>ITE Trip Generation</b>
<b>AM Peak Hour</b>	1,392	3,011
<b>PM Peak Hour</b>	1,403	3,589
<b>ADT</b>	14,195	26,803

Since the ITE trip rates are not consistent with or reflective of the existing conditions at the Park, actual trip generation rates have been calculated to estimate future traffic conditions. These new Quonset Davisville Trip Generation Rates have been developed based upon the relationship of existing employees and existing traffic data.

MGI has assumed, for traffic projection purposes, that the future development and resulting employee distribution by land use will be similar to the existing land use distribution. These trends should be monitored as the Park develops and their effects on trip generation reviewed periodically. Because the proposed mix of land uses is similar, it is expected that the existing AM and PM peak hour and the existing AM and PM peak travel time periods will remain the same. Table 4.6 presents the projected employee distribution for the Quonset Davisville development. Scenario 2 of the waterfront development land use concept is presented because it projects higher employment in the Davisville Waterfront District.

**Table 4-6. Employee Distribution by Zone.**

<b>Zone</b>	<b>Number of Employees</b>		
	<b>2001 Existing</b>	<b>New Development</b>	<b>2021 Total</b>
<b>A</b>	4,390	485	4,875
<b>B</b>	1,180	4,965	6,145
<b>C</b>	210	960	1,170
<b>D</b>	507	1,615	2,122
<b>E</b>	0	120	120
<b>TOTAL</b>	6,287	7,595	14,432

The existing and future land uses are fairly consistent with no major shift that would affect traffic generation. Therefore, new traffic generation rates can be established for the Quonset Davisville development. A unique rate was calculated for the site based upon the existing traffic counts and the distribution of employees using the roadways. The number of existing trips divided by the number of existing employees calculated the number of trips per employee for the site.

The future traffic expected at full build-out of the Park in 2021, based on the projected number of employees, is an ADT of 46,332 vehicles. The AM peak hour will generate 4,554 vehicles and the PM peak hour will generate 3,846 vehicles. The distribution of vehicles on the roadway network will reflect the employee distribution, which is 50.4 percent on Davisville Road and 49.6 percent on Roger Williams Way. In the future full build scenario, employee distribution will be evenly shared between Davisville Road and Roger Williams Way.

New Trip Generation Rates were developed for the Park. A unique rate was calculated for each roadway based upon the existing traffic counts and the distribution of employees using the roadway. The number of existing trips divided by the number of existing employees calculated the number of trips per employee for each roadway and for the site.

Table 4.7 presents the existing traffic count data used to determine the trip generation rates for the Industrial Park. Trip generation rates for the entire industrial park were developed using the total number of employees in the industrial park.

**Table 4-7. 2001 Traffic Conditions.**

	<b>Roger Williams Way</b>	<b>Davisville Road</b>	<b>Industrial Park*</b>
<b>Employees</b>	1,050	5,027	6,077
<b>AM Peak Hour</b>	304	1,184	1,392
<b>PM Peak Hour</b>	332	1,114	1,403
<b>ADT</b>	3,650	10,537	14,150

\* Does not include Zone C, i.e., West Davisville trips

The AM and PM peak hour trip generation rate per employee for the Park is the same, 0.23. The ADT trip generation rate for the Industrial Park is 2.34. Table 4.8 presents the trip generation rates for the existing industrial park that were used to develop traffic projection for the future development.

**Table 4-8. Calculated Trip Generation Rates - Employees vs. Traffic Data.**

	<b>Employees</b>	<b>Traffic</b>	<b>Actual Rate</b>
<b>ADT</b>	6,077	14,150	2.347
<b>AM Peak</b>	6,077	1,392	0.23
<b>PM Peak</b>	6,077	1,403	0.23

Table 4.9 presents the number of projected new employees that are forecast for the year 2021 in the 2003 Master Plan.

**Table 4-9. Future Employee Distribution by Roadway Zone (2021).**

	<b>Davisville Road</b>	<b>Roger Williams Way</b>	<b>Total (Zones A, B, D, E)</b>
<b>Employees</b>	8,878 (53.1%)	7,842 (46.9%)	16,720 (100%)

Table 4.10 shows the number of employees that will have been forecast for the year 2021 distributed between each development zone. The number of new trips is the product of the number of employees and the calculated trip generation rate for the Park.

**Table 4-10. Future Employee Distribution by Roadway Zone (2021).**

<b>Existing</b>	6,287	minus 210 for Zone C	6,077
<b>New Employees</b>	11,944	minus 1301 for Zone c	10,643
<b>Future Employment (2021)</b>	18,231	minus 1,511	16,720

Table 4.11 presents the future traffic expected to be generated from future development at the Park based on the total number of employees. In 2021, the Park will generate an ADT of 39,125 vehicles. The AM peak will generate 3,867 vehicles and the PM peak will generate 3,864 vehicles. The distribution of vehicles on the roadway network will reflect the employee distribution, which is 53.1% on Davisville Road and 46.9% on Roger Williams Way. In the future full build scenario, employee trip distribution will be evenly shared between Davisville Road and Roger Williams Way.

The distribution of employees equates to 1,908 vehicles in the peak hour on Roger Williams Way and 1,938 vehicles during the peak hour on Davisville Road. It should be noted that there will be

approximately 1,300 employees in Zone C (West Davisville), who are not expected to generate trips on Davisville Road or Roger Williams Way. This is because of West Davisville's separation from the rest of the Park located east of Route 1 and the ability for the employees to use other roads for access.

**Table 4-11. Existing, New and Future Trips.**

	<b>Trips</b>	<b>Roger Williams Way</b>	<b>Davisville Road</b>	<b>QP/D Park</b>
<b>AM Peak Hour</b>	<b>Existing</b>	1,184	304	1,488
	<b>New</b>	724	1,634	2,358
	<b>Total</b>	1,908	1,938	3,846
<b>PM Peak Hour</b>	<b>Existing</b>	1,114	332	1,446
	<b>New</b>	794	1,606	2,400
	<b>Total</b>	1,908	1,938	3,846
<b>ADT</b>	<b>Existing</b>	10,500	3,650	14,150
	<b>New</b>	8,906	16,069	24,975
	<b>Total</b>	19,406	19,719	39,125

\*Does not include Zone C, West Davisville

The projected future trips entering and exiting the site during the morning and evening peak periods are consistent with the forecast by the Relocated Route 403 Environmental Impact Statement project.

#### **4.2.3 Traffic Generation Conclusions**

Due to the unique traffic characteristics of the existing density of development at Quonset Davisville Port and Commerce Park, standard ITE trip generation rates do not correlate to the existing known traffic data. New trip generation rates for the Park were determined based upon the relationship between existing traffic counts and the existing number of employees in various land uses. The new trip generation rates were then applied to the number of forecasted employees for the future build-out of the site. Using the new generation rates, in the full build-out (2021) the Park will generate 3,846 AM peak hour trips, 3,846 PM peak hour trips, and have an ADT of 38,125 trips.

##### **4.2.3.1 Impact to Proposed Route 403**

The *Final Environmental Impact Statement for the Improved Access to Quonset Point/Davisville from Route 4 (FEIS)*, 1995 assumed that the industrial park would generate an average daily traffic (ADT) of 22,000 trips from an assumed 12,930 employees at the Park. The 2003 Master Plan expects that the approximately 17,000 employees of the Park in 2021 will generate over 39,000 ADT at total build-out. In addition, at total build-out, the Park peak travel period will not occur during one distinct hour, but will extend over as many as three hours.

The *FEIS* traffic study distributed 3,344 vehicle trips from the industrial park onto the proposed expressway during the peak hour. In the 2003 Master Plan, full build-out of the Park in 2021 would generate 3,800 trips (2,300 on Roger Williams Way and 1,930 on Davisville Road) during the peak hour. The Master Plan traffic study assumes that 80 percent of the Park generated trips (or 3,000 trips) will use the relocated Route 403 expressway and the remaining 20 percent will use Route 1 to access the industrial park. Therefore, the 2003 Master Plan trip generation is consistent with the

FEIS at full build-out. The new Route 403 will consist of two travel lanes in each direction of 1,800 vehicles per lane per hour.<sup>1</sup>

#### 4.2.3.2 Impact to U.S. Route 1

According to 1998 traffic count data (24-hours) provided by RIDOT, ADT on Route 1 was 23,000 south of the Park entrance at Roger Williams Way and 18,500 north of the Park entrance. Assuming these totals were to increase by 10 percent by 2021, ADT would be 25,300 south of the Park and 20,350 north of the Park. Assuming peak hour traffic is roughly 10 percent of these totals, therefore peak hour traffic would 2530 south of the park and 2035 north of the park.

It is expected that 50 percent of the Route 1 traffic in 2021 would travel to and from the north and the remaining 50 percent would travel to and from the south. Route 1 consists of two travel lanes in each direction. The 600 trips split between Route 1 northbound and Route 1 southbound at full build-out should have a minimal impact on traffic during the peak hour, but yearly traffic flow statistics should be monitored in relation to background traffic growth.

#### 4.2.3.3 Interim Impacts to Davisville Road (existing Route 403)

Interim traffic impacts due to background traffic growth and any development within the Park would be expected on Davisville Road (existing Route 403) between the railroad corridor and Route 4 until Phase 2 of the Relocated Route 403 project is completed. Construction on Phase 1 began in spring 2001 and is scheduled for completion in 2006. Phase 1 includes the segment between the new interchange with Route 1 (Post Road) and School Street/Davisville Road adjacent to the Northeast Railroad corridor. The new four-lane expressway would temporarily merge with the two-lane Davisville Road at School Street until completion of Phase 2 of the project. Phase 2 is assumed to begin construction in 2007 after Phase 1 is completed. Phase 2 includes construction of the remaining segment between School Street/Davisville Road and Route 4. If Phase 2 construction were to take another 6 years, it would be completed in 2012. Therefore, it would be expected that between 2007 and 2012, this segment of Route 403 would experience additional traffic due to background traffic growth and due to any development at the Park. In 1998, ADT was 13,600 in this segment, according to RIDOT counts. This traffic would be expected to increase as the Park develops during this period. The above referenced *FEIS* anticipated that mitigation would be required. Accordingly, the preferred alternative includes Transportation System Management (TSM) improvements in the area of public transportation, according to the Federal Highway Administration *Record of Decision* for the project, February 1965.

### 4.3 Roadways

#### 4.3.1 Regional Access

Interstate Highway 95 (I-95), five miles northwest of the Park, is the major roadway providing regional access to the site. The first segment of the roadway connection from I-95 to the site is on a limited access divided highway (Route 4), and the second segment is on a two-lane road (Route 403). Direct I-95 access from the north (Providence and Boston) is provided via ramps to Route 4 southbound. Direct I-95 access from the west (New York and Connecticut) to Route 4 southbound is not provided. Access is via I-95 ramps to Route 2 southbound, approximately 0.5 miles east of Route

<sup>1</sup> *Highway Capacity Manual, Special Report 209*, Transportation Research Board. Washington, DC, 1994.

4 through a signalized intersection at Route 401, then to Route 4. Although RIDOT is planning to provide such a connection in the future the project is not currently funded.

Access to the site from the south (southern Rhode Island, Newport and the East Narragansett Bay area) is provided via Route 4, which intersects Route 1 approximately 8 miles south of the site, and directly on Route 1.

**Relocated Route 403:** Regional highway access to the Quonset Davisville site will be improved significantly. Access from Route 4 to Quonset Davisville now is via Route 403, a winding two-lane arterial road that terminates at the intersection of Roger Williams Way and Davisville Road just east of Route 1. From the intersection with Route 4, Route 403 also is named Davisville Road and passes through an historic district until it crosses over the Amtrak Northeast Railroad Corridor. East of the rail corridor, Route 403 is named Devils Foot Road, and passes through a residential apartment district until it passes under the Route 1 (Post Road) viaduct and ends. RIDOT began construction in spring 2001 of the first phase of a full expressway connection on a new right of way between the Park and Route 4. The segment of the relocated Route 403 east of the railroad corridor is under construction and is scheduled for completion in 2006. However, only the first phase between the Park and the Northeast Railroad Corridor is funded. The remainder of the realigned 403 project between the railroad corridor and Route 4 will be scheduled for funding later. When the first phase is completed, a four lane expressway facility on a new right of way will connect existing Davisville Road, the name of the road west of the railroad corridor (a segment of Route 403), with the Route 1 and the Park's major arterial roads.

The connecting ramps between Route 403 and Davisville Road in the Park (Ramps A and EE) will be designed as two lanes in both directions, according to RIDOT. Gate Road is designed to terminate at Davisville Road at an at-grade signalized intersection. Ramp BB (from Quonset Road) will be on a viaduct over Davisville Road and the Davisville main railroad line and terminate at Gate Road.

**Route 1:** U.S. Route 1 is a major four-lane arterial road in a north-south alignment, providing local access between Warwick and southern Rhode Island. Route 1 passes in front of the main entrance to Quonset Davisville Port and Commerce Park. Access to the Park is provided at a signalized intersection leading to the intersection of the Park's two main circulation roads, Davisville Road and Roger Williams Way.

#### **4.3.2 Quonset Davisville Internal Circulation System**

**Arterials ("Roads"):** The site has two existing primary roadways, Roger Williams Way (four lanes) and Davisville Road (two lanes.) The proposed circulation plan maintains these roadways. Because Roger Williams Way serves the Quonset area of the Park, it is recommended that it be renamed Quonset Road. Recommended name changes are used throughout the Master Plan when referring to proposed conditions. Davisville Road will remain a two lane roadway. It is proposed to be improved to a boulevard type roadway to enhance its curb appeal. Quonset Road is currently of adequate width and in good condition. Davisville Road is not in good condition. In addition, an improved Cross Park Road would consist of one lane in each direction and be constructed as local improvements to Jones and Northrup Roads and Cripe Street.

Combined, Quonset, Davisville and Cross Park Roads would form the main circulation system in the Park. With the addition of an improved third leg to the existing roads, Cross Park Road, the entire Park would be unified by a triangular circulation system of arterial roadways. See Figure 4.2, Proposed Circulation System shows the proposed roads as well as the hierarchical street network that is recommended for Quonset Davisville.

Collector Roads (also called “Roads”): The collector road system would connect the arterial and local streets, and also are recommended to be called “Roads.” In West Davisville, a RIDOT-proposed diamond interchange at the Relocated Route 403 Project would provide a new collector road between Devils Foot Road and the West Davisville district. This future road has been named West Davisville Road. Within Executive Park, a collector road (Gate Road) would provide access between Post Road and Davisville Road. Gate Road and a new local street, Executive Park Street and provide a new address for office uses. The proposed transit center in Executive Park will be evaluated in a forthcoming study by RIEDC.

In North Davisville, a new collector road is proposed generally along the alignments of existing roadway remnants to serve two major functions. First, it would funnel traffic between the Cross Park Road and two points along Davisville Road. North Davisville Road would provide new accessibility for interior land parcels.

In Commerce Park, a new collector road, Commerce Park Road, connects to Cross Park Road and Quonset Road. The westerly segment of Callahan Road, east of former Spinnaker Street, connecting to Davisville Road has been permanently closed due to construction of the Route 403 Interchange.

The industrial park’s roadway cross-section (shoulder width and landscaping) establishes the character of the development. A first class site should develop roadways with ample landscaping, large frontages and sufficient roadway capacities to accommodate peak period traffic flows. Collector roads are, therefore, recommended to be two-lane roads with shoulders.

Local Access Streets: Local streets are not discussed, as many of the existing streets are likely to be replaced to better serve future parcel development for industrial tenants/owners. Local streets should be two lanes wide and intersect with collector roads only, not with the three major roads, if at all feasible.

## **4.4 Parking**

The RIEDC “Development Package” published in 1992, which will be updated as a result of revisions to the Master Plan, suggests various controls on development of the “Quonset Point/Davisville Industrial Park”, including parking. Recognizing that these controls may not be readily adaptable to all development situations, RIEDC would work closely with business clients in adapting controls to specific development situations. Parking within the industrial park should be consistent with the RIEDC revised Development Regulations prepared as part of the 2003 Master Plan work effort. Major objectives of the revised regulations included parking requirements consistent with business and industry needs and site planning requirements that would provide for landscaped parking areas and transit center, where appropriate.

## **4.5 Commuter Characteristics**

RIEDC sent a survey to Park employers in April 2001 to determine the commuting habits of employees within the Park. Employers were asked to indicate their district within the Park, current and future staffing levels, modes of transportation used by employees to arrive at work, employee transit use, staff arrival and departure times, and the estimated amount of vehicles arriving on site. In addition, employers were asked to provide a list of the towns and zip codes in which employees lived

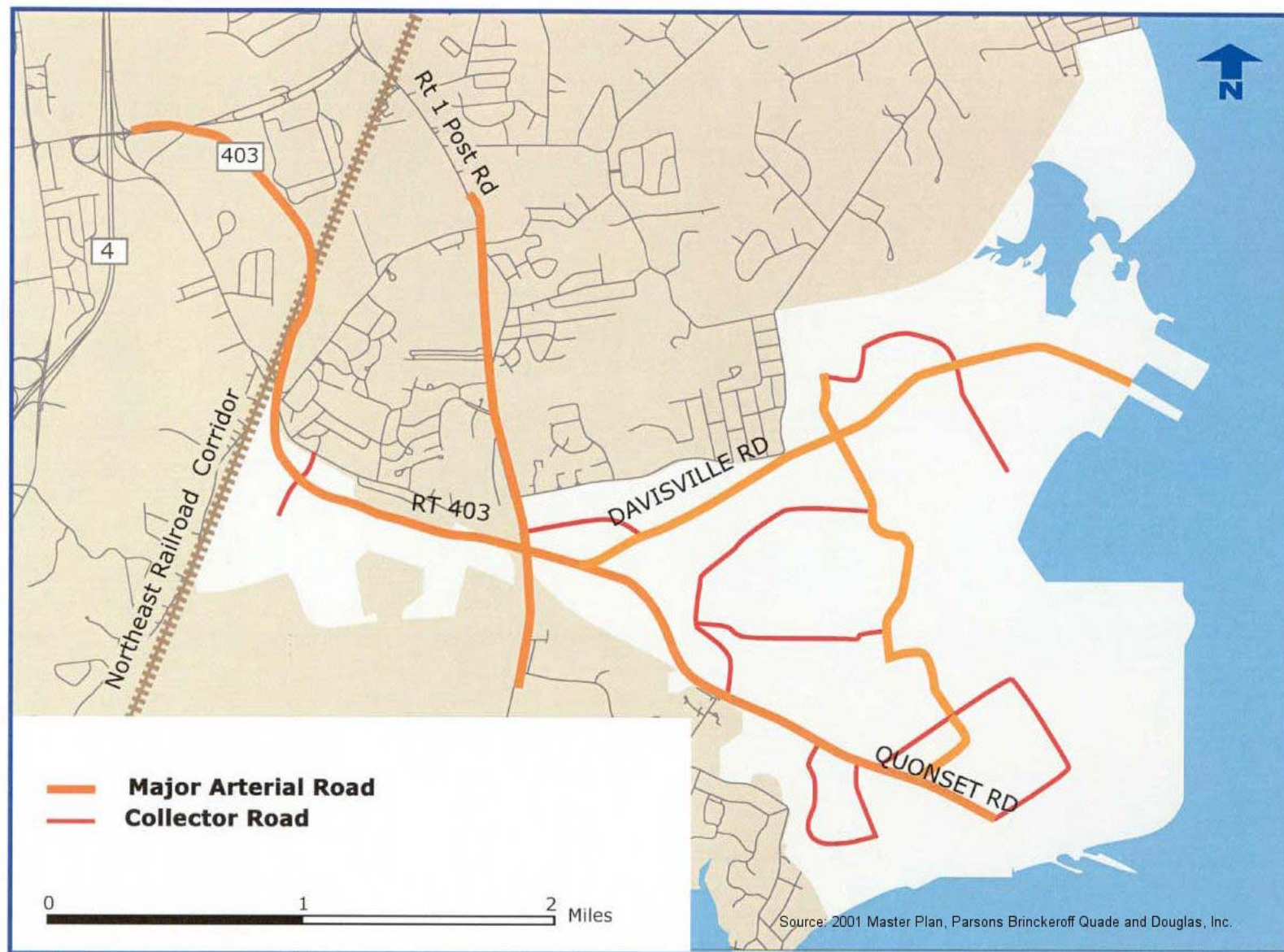


Figure 4-2. Proposed Circulation System.

and the number of employees residing in each. As of May 2, 2001 survey forms were received from 32 companies and 31 zip code lists were received, covering approximately 3,500 employees. This response represents over half of the 6,200 employees at the site (56 percent) and provides a reasonable sample.

The economic reach of the Park spreads throughout the entire state of Rhode Island and into neighboring southeastern Connecticut and southeastern Massachusetts (Figure 4.3). Of the 3,498 employees for whom residence zip code information was provided by employers approximately 89 percent of current employees live in Rhode Island, 2.3 percent in Connecticut and 3.6 percent in Massachusetts. Over a third of the Rhode Island employees (37.3 percent) live within a 10-mile radius of the site, primarily in North Kingstown, Warwick, West Warwick and Coventry (see Figure 4.3, Locations of Residences of Employees at Quonset Davisville. Secondary concentrations of employees are located in Providence (7.4 percent) and Cranston (4.9 percent). The largest concentrations of employees were in the following:

1. North Kingstown-392
2. Warwick-358
3. Coventry-321
4. Providence-276
5. West Warwick-158
6. Cranston-152
7. East Greenwich-109

Major roads have been overlaid on top of the map showing the number of employees living within each zip code. From observing the map, it is assumed that most of these employees living within a 10-mile radius travel on Routes 1, 4, 95, 138, and 403 (in various combinations) to and from the site.

A total of 3,534 employees are accounted for in the returned surveys. Based on the responses, virtually all employees commute by private automobile; very few by commuter van. According to the survey, very few employees use public transit because the schedules are inconvenient. According to the survey, over half of the companies (18 of 32 or 56 percent) did not express employee interest in an internal (on-site) shuttle bus service. Reasons cited varied, but generally included incompatibility with work hours, lack of single destinations, and the flexibility provided by using a car. However, over a third of the firms (36 percent) did state that employees would make use of such a shuttle if provided. Shift times vary throughout the Quonset Davisville site, which generally extends the morning and afternoon peak travel period to several hours.

Implications for planning transportation services and facilities at the site are the following:

- The Route 403 project, particularly the interchange with Route 1, Roger Williams Way (Quonset Road) and Davisville Road under construction, should be completed as soon as possible to relieve congestion at the intersection and on local streets due to growing commuter (and truck) traffic. This congestion is likely to increase due to the employee growth rate at the site (425 a year since 1997) and the overwhelming preference by employees to drive to and from the site.
- The extended peak periods of travel by commuters to and from the site, however, tend to reduce traffic congestion somewhat as compared to the shorter peak periods at other business parks. This is due to the higher component of heavy industrial employers at the site (e.g., Electric Boat and Toray Plastics) that operate with varied shifts.

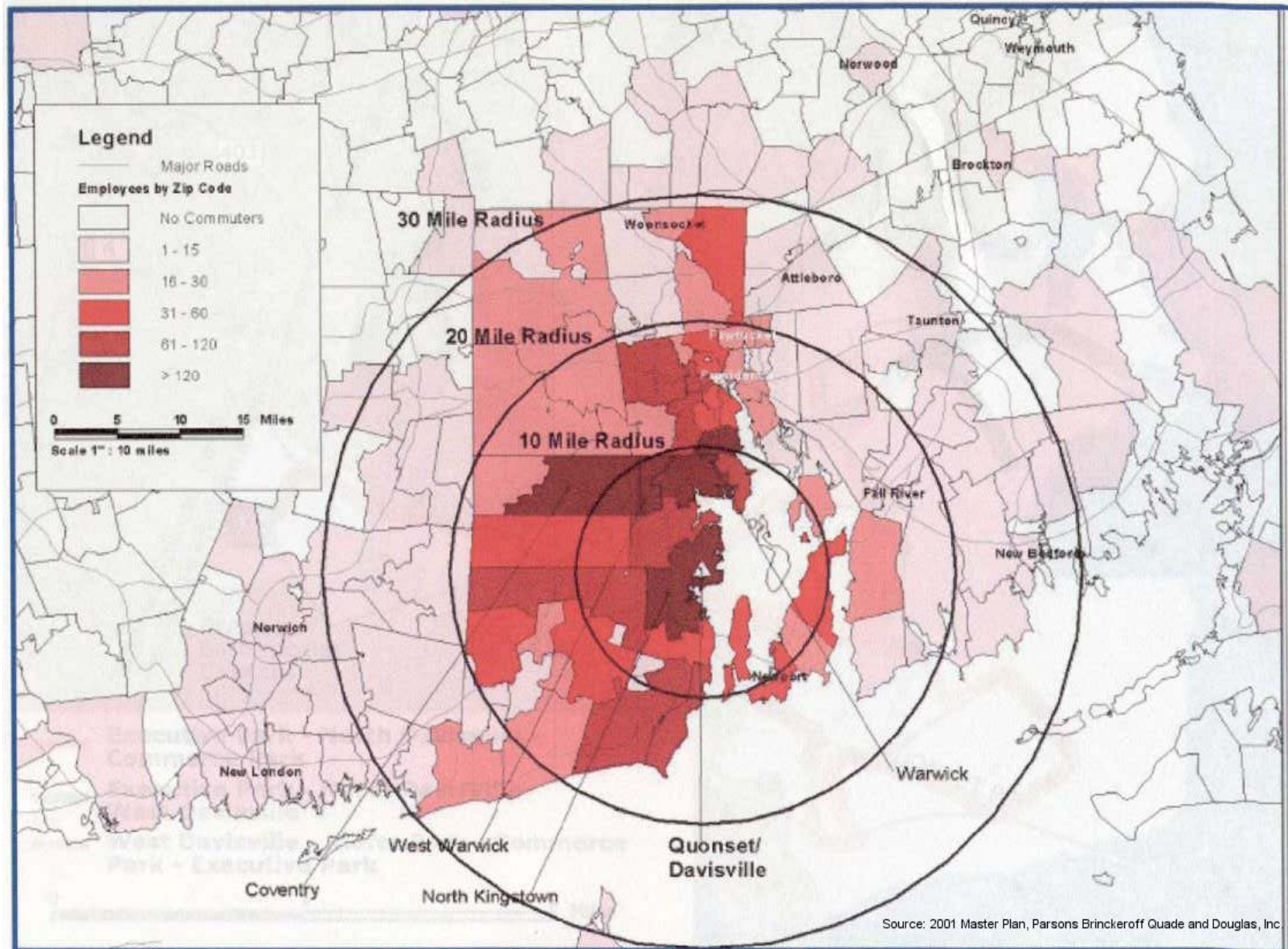


Figure 4-3. Location of Residences of Employees at QDPCP.

To attract riders, public transit service must meet schedule and origin/destination needs of employees, particularly those on shift schedules, and buses must be appropriately routed to travel through the towns and cities with the heaviest concentration of employees. Commuter van programs may be more successful in reducing Single Occupancy Vehicle (SOV) travel than fixed route bus service due to the dispersed destinations in the Park and varied shift times.

## **4.6 Multi-Modal and Transit Centers**

The unique features of the Park include the combination of rail and highway access that can serve multiple purposes. Two types of multi-modal centers could be considered for the Park: a freight multi-modal center and a transit center.

Access to West Davisville will be improved by both the Route 403 Relocation Project and the Freight Rail Improvement Project. A freight multi-modal center site could be convenient to access both the Northeast Railroad Corridor and the relocated Route 403 exit at West Davisville Road. Approximately 15 acres will be needed for new railroad spur(s) and truck parking/loading/unloading. A potential transit center for commuters could be considered when the Providence commuter rail system is developed. The center will be in scale with the surrounding community.

A transit center could be located in Executive Park near the hotel/restaurants to provide for transfers between RIPTA's regional bus and Park shuttle bus services. Also recommended is space for commuter vans, taxis, bicycles and pedestrians. The center will be consistent in scale with the surrounding community and sensitive to the adjacent residential areas. In combination, the hotel/restaurant/transit center uses can become a major node of activity at the entrance to the Park.

A 50-foot-wide landscaped buffer including a bike path is proposed along Newcomb Road, to link the transit center and the planned West Bay Bikeway along Post Road with Calf Pasture Point along the northern edge of the Park. This recommendation is included in the Base Reuse Plan, the 1998 Draft Master Plan and the 2001 Master Plan.

## **4.7 Transit**

RIPTA's Providence-Wickford-Narragansett-Jamestown route operates via Post Road past the entrance to the site. Nine round-trips operate daily. The first arrival from Providence is at 8:50 A.M., not well suited for many site employees. RIPTA inaugurated bus service from Newport and Providence direct to Electric Boat in 2000. However, both lines, although scheduled to the work shifts, were practically unused and the service from Providence was discontinued in fall 2001. Service from Newport continues. However, in the long-term as employment levels grow, it is anticipated that single occupancy vehicle trips can be reduced by 5 to 10 percent as transit services to and within the Park are implemented and well-marketed.

Water Transit: RIDOT and RIPTA prepared a water transport study in 1998 for the State, evaluating potential routes, ridership, and vessel types. The most marketable routes appeared to be between Providence, Newport, and Block Island and between Providence and Pawtucket. Demonstration ferry services between Providence and Newport and between Providence and Pawtucket were initiated in 2000. The former carried over 38,000 riders (largely tourists and day visitors to Newport) and has been continued in 2001. The Pawtucket service was dropped.

As Quonset Davisville develops to its full potential, a water transit service to the Park may become feasible. Service from East Bay, including Newport, may become feasible since some passengers on private corporate jets using Quonset State Airport have final destinations in the Newport area. In

addition, if a tourism site is developed at the Carrier Pier, water ferry service from Providence and Newport should be investigated.

A water ferry dock near the airport, at the Carrier Pier or the Quonset Waterfront district, is a likely candidate site. In June 2003, a high-speed ferry began operations from Quonset to Oak Bluffs in Martha's Vineyard. Another site at the Davisville waterfront may have potential, although it is unlikely that two stops at Quonset Davisville would be warranted because of cost and operational issues.

**Future Commuter Rail:** Currently, RIDOT is evaluating the possibility of extending commuter rail service from Providence to Westerly, as part of its South County Commuter Rail Study. The study is evaluating the operational issues of commuter rail south of Providence, and engineering for a commuter rail station at Wickford Junction, south of Quonset Davisville. However, RIDOT is not recommending a commuter rail station at West Davisville as part of its study of initial commuter rail start-up service. In addition, a West Davisville commuter rail station and transit center is not explicitly recommended in the update of the Transportation 2020, the State's Ground Transportation Plan, but it does endorse the RIDOT study.

With approximately 22,000 employees on site in 2021 at total build-out, the largest future concentration of jobs in the West Bay south of Providence, there appears to be enough potential demand to support a commuter rail station at West Davisville. Therefore, this Master Plan recommends that RIDOT consider a future station at West Davisville, to be linked to the rest of the Park by a shuttle bus service. Further, the 2001 commuter survey of Quonset Davisville employees conducted for this Master Plan supports this recommendation since well over half of the existing employees commute in the North Kingstown-Providence corridor, the precise alignment of the commuter rail service that RIDOT is studying. Specifically, the West Davisville station could be located on a side adjacent to the mainline and could be accessed from relocated Route 403 via West Davisville Road. Space should be provided for parking, shuttle buses and bicycles.

## **4.8 Bicycles and Pedestrians**

Currently, there are few bicyclists and pedestrians at Quonset Davisville. The general absence of a continuous network of sidewalks, bicycle accommodations, and conveniently accessible destinations are disincentives to such activity. Future development at Quonset Davisville should encourage bicycle and pedestrian access by greatly improving accommodation of these two alternative transportation modes.

In general, exclusive use bicycle paths (off road) should be approximately 12 feet wide and should be striped for two-way operation (a minimum 10-foot width is acceptable, but not desirable). Bicycle accommodation along roads should include signage designating the roadway as a bicycle route. The type of on-road bicycle accommodation should consider the following issues: average daily vehicle traffic, presence of heavy vehicles, posted speed limit, and the width and condition of pavement. On-road bicycle routes may be designated using "wide curb lanes", marked bicycle lanes, or on paved shoulders (in areas where on street parking is prohibited).

Pedestrian accommodation varies from site to site, however typical sidewalks are at least five feet wide to accommodate two pedestrians side by side. Narrower sidewalks may be acceptable for shorter distances or to connect buildings in a development. All sidewalks should comply with the provisions of the Americans with Disabilities Act of 1990 (ADA). The act specifies curb cuts and other accommodations appropriate for persons with disabilities.

The Base Reuse Plan proposed bike paths along the northern edge of the Park, linking Calf Pasture Point and the proposed West Bay Bikeway along Post Road, and this proposal is reaffirmed in this Master Plan (Figure 4-4). The bike path also would connect to the Executive Park Transit Center and the Seabee Park. In addition, it could be accessed by on-road connections in West Allen Harbor and along Devils Foot Road from the proposed Commuter Rail Station in West Davisville. The Devils Foot Road connection is proposed for completion after the Route 403 project has been built.

Within the Park, bicycle routes should be designated along Cross Park Road, providing access to the center of the Park and adjacent open space areas, the golf course and the airport. The bicycle route should continue across Roger William Way into Kiefer Park along Circuit Road. Neighborhood access to Kiefer Park and a potential segment of the proposed West Bay Bicycle Path could also be provided at Camp Avenue. In addition, the Circuit Road Bicycle Route will provide a connection to the waterfront's public access easement. For on-road designated bicycle routes, the roadway shoulders should be a minimum of four feet wide. Bicycle racks and lockers could be provided at the transit centers to encourage passengers to use bikes to get to jobs in the Park. Employers should be encouraged to provide additional bicycle facilities for their employees. These facilities could include conveniently located secure bicycle parking, changing rooms, and locker rooms with showers.

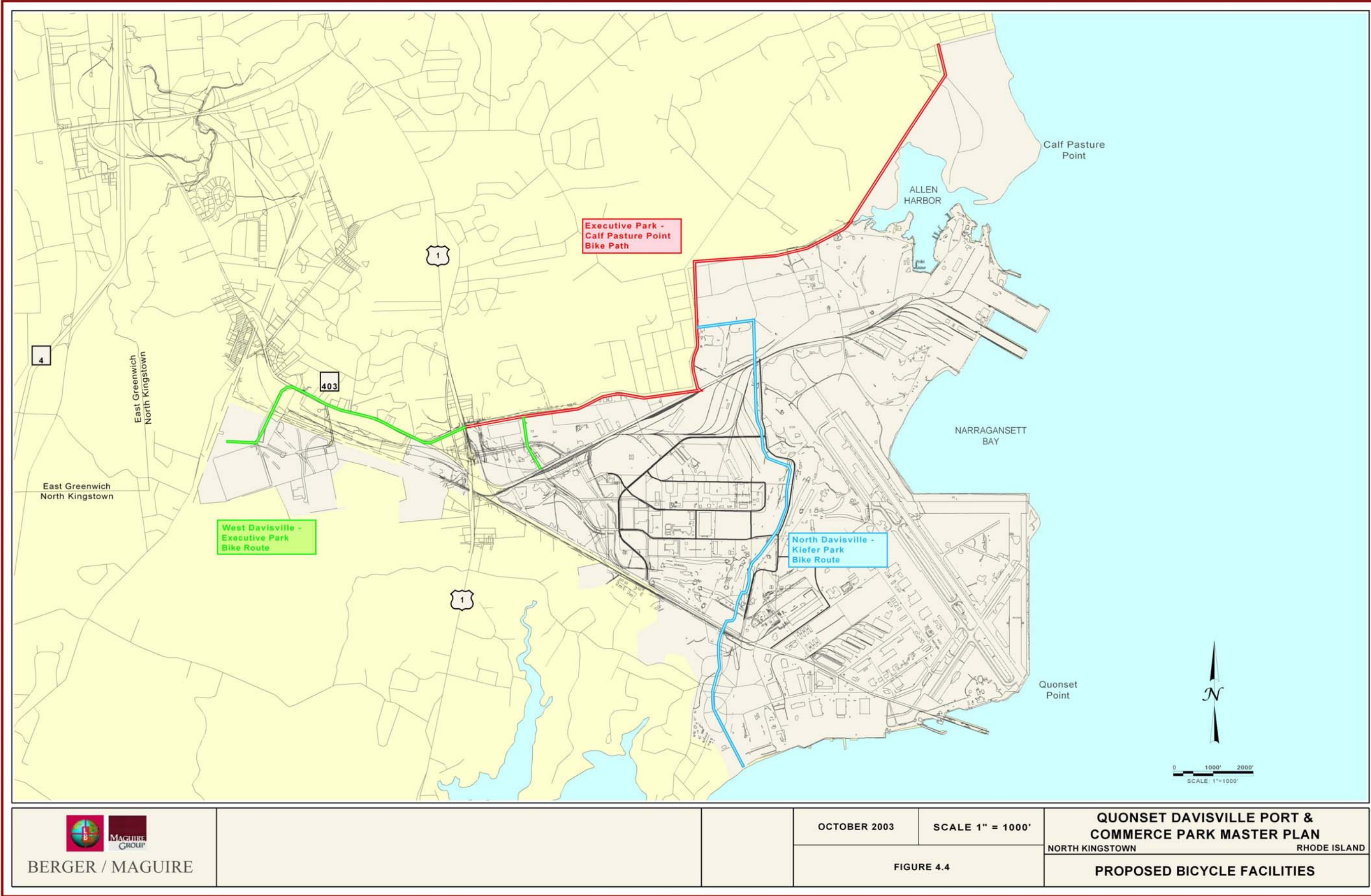
Ultimately, every passenger, regardless of transportation mode, becomes a pedestrian. This fact should not be ignored in the design and layout of individual developments within Quonset Davisville. There are particular opportunities for pedestrian accommodations in the relatively high density transit center/Executive Park area. Not only is the mix of land uses proposed here (retail, office, hotel, etc) catering to the businesses and their employees within the park, but they would also be within convenient walking distance from the neighborhood across Newcomb Road. Elsewhere in the Park, sidewalks and pedestrian accommodations should be provided along the avenues and roads.

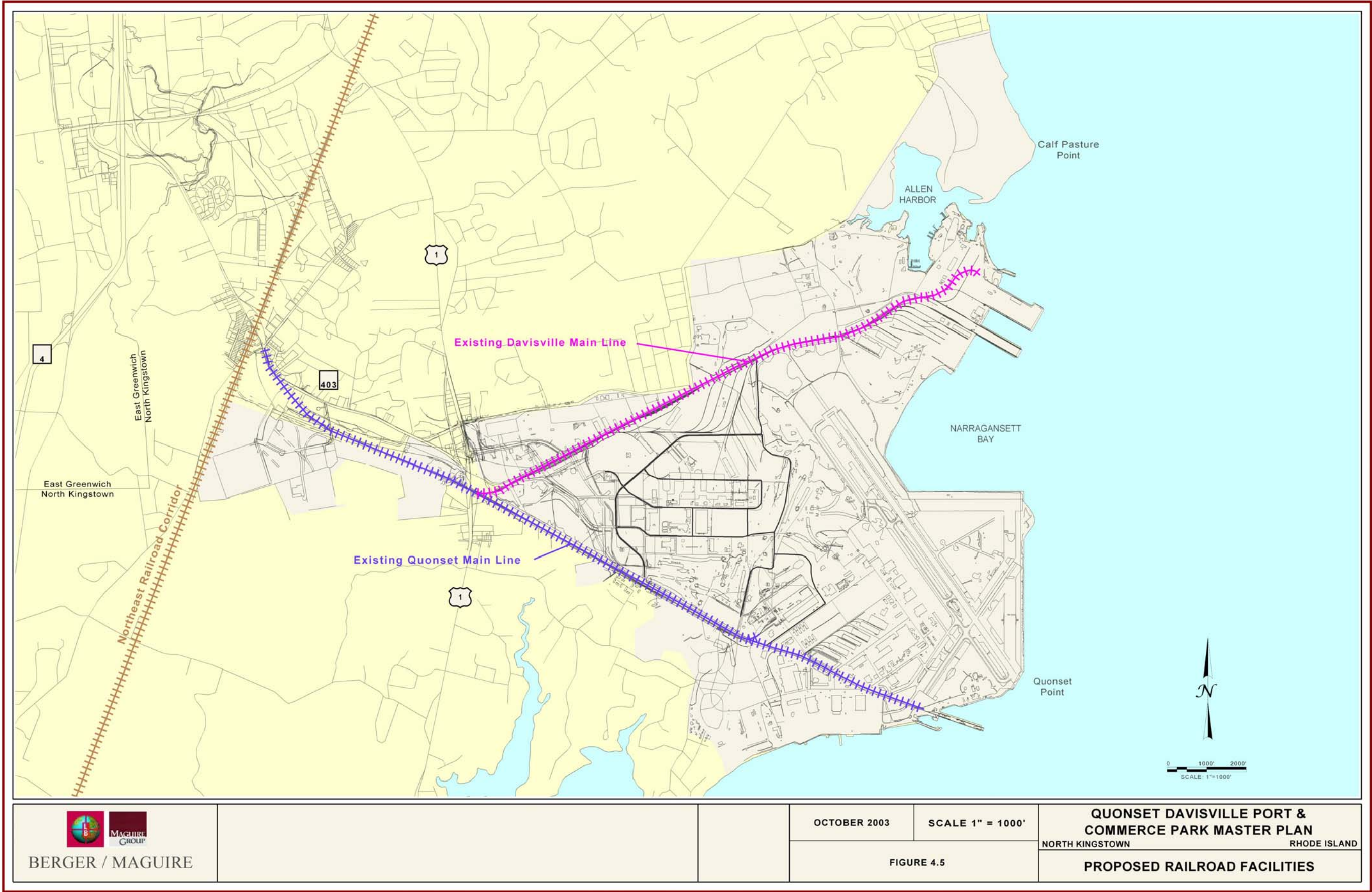
## **4.9 Railroads**

As the Navy gradually phased out its operations at Quonset Point, the need for a private railroad operator became apparent. The Seaview Railroad, officially the Seaview Transportation Company, Inc., currently is the provider of rail service in the Park. Most of the rail facilities are owned by the RIEDC, and Seaview is a tenant paying rent based on a percentage of its monthly revenues. All of the Seaview railroad tracks were formerly developed and used by a U.S. Government Railroad operated by the U.S. Navy. Many miles have of track have been removed by RIEDC and, reportedly, only about six route miles of railroad are used.

The railroad facilities continue to play an important role in daily operations at Quonset Davisville. Rail infrastructure is a key factor in the site's multiple transportation attractiveness and is an important element in the overall economic health and vitality of the Quonset Davisville industrial area (Figure 4.5). The rail facilities:

- Can be used for future commuter rail with improvements;
- Provide rail access to numerous existing, used and vacant facilities;
- Can be reconfigured, while retaining the two main trunk lines, to accommodate new businesses and industries within the Park;
- Can be reconfigured at the Davisville piers to handle automobiles;
- Provide site occupants with a means to leverage the cost of transportation among all modes so that their product cost remains competitive in U.S. or world markets; and
- Provide a direct outlet, via the Northeast Corridor, to rail markets in North America.





The existing rail facilities have sufficient trackage to allow Providence & Worcester Railroad Company (P&W) freight trains to clear the Northeast Corridor at West Davisville without delaying Amtrak trains. This will be especially important as Amtrak acquires additional Acela electric train sets capable of speeds of 150 miles per hour (mph) and increases the frequency of service between Boston and Washington. This increase in speed and train density drives the need for safe and efficient freight service to the Park in order to protect corridor operational efficiencies.

Seaview is essentially a terminal railroad that relies on the P&W as its connection to the outside world. P&W interchanges its freight traffic with CSX at Worcester, Massachusetts. From that location, P&W has connections to railroad-served locations in North America. The P&W operates on the Northeast Corridor (owned and operated by Amtrak) between Boston Switch (MP 190) in Pawtucket and Davisville (MP 168) where the P&W leaves the corridor and enters trackage owned by the RIEDC.

The trackage between the Amtrak mainline (at West Davisville) and the entrance to Quonset Davisville proper at Route 1 is termed the Quonset Main West (approximately 6,700 feet in length). Immediately south of the Route 1 overpass, the rail line splits with one branch extending approximately 13,000 feet to Quonset Point (Quonset Main East) and the second branch extending approximately 14,000 feet to Davisville (Davisville Main).

Several projects impact the Quonset Davisville Seaview Railroad facilities and operations. The Route 403 Relocation Project alignment passes directly through the present engine house and track material storage pad of Seaview Railroad. As traffic grows, the present capacity of West Davisville Yard may be exceeded. In that event, additional capacity would need to be provided. A second level of expansion, if warranted, would be to provide additional railroad yard capacity elsewhere, preferably closer to actual loading/unloading operations in West Davisville. The “Rhode Island Freight Rail Improvement Project (FRIP) Major Investment Study-Draft Environmental Impact Statement/Draft 4(f) Evaluation, February 1996,” cited several basic types of rail traffic as having potential for growth or generating new types of rail traffic to Quonset Davisville. FRIP growth may include:

- General freight (existing carload traffic);
- Automobile transport by rail (new traffic not now possible due to inadequate clearances);and

In addition, RIDEM stated in comments dated September 4, 2001,

“If new railroad lines are being proposed for the park and this involves the re-alignment of existing railroads the existing rail beds should be checked for possible contamination. PCB’s and creosote are typically found in rail beds.”

This type of work should be undertaken as development warrants. However, if improvements are made to increase rail use, such as by NORAD, then RIDEM’s directions will be followed when improvements are made. The proposed railroad yard may still be needed in West Davisville. Potential increases in automobile imports at the Davisville Piers may be able to shift to rail rather than trucks because of the new capabilities to be provided in the Northeast Railroad corridor due to the Freight Rail Improvement Project (FRIP) to be completed at the end of 2003.

#### **4.10 Strategies to Reduce Vehicle Trips**

A combination of strategies is suggested for reducing the number of single occupant vehicle trips to Quonset Davisville. These strategies include:

- park and ride lots;
- site development;
- shuttle bus service;
- ridesharing;
- vanpooling;
- public transit;
- employee incentive programs;
- water transit; and
- bicycle and pedestrian facilities.

The proposed extension of commuter rail service south of Providence along the Northeast Railroad Corridor should include a station at West Davisville. Limited parking, bus, bicycle, and pedestrian facilities should be included.

Developers of manufacturing and office buildings should consider siting the entrances to buildings in such a manner so as to be convenient to public transportation passenger buses and inter-building pedestrian routes. This would be particularly appropriate at Executive Park where the employee density would be the highest in the Park. This type of building and entry siting would facilitate movement of passengers to bus stops. In addition, clustering of buildings and the radius and pavement depth of driveways should be reviewed during design to complement bus service.

Consideration should be given to operation of a shuttle bus service within the Park. The routes should serve particular employment and activity nodes including the following: the airport terminal, RIEDC administration building, Post Road hotel and restaurants, larger employers, water transit docks (if developed), “O” Club, Golf Course Club House, marinas, health center, day care center, convenience lunch spots and the two proposed transit centers in West Davisville and Executive Park. This service would be most practical at peak commuting hours as well as during the lunch period, and should be coordinated with any regular schedules of bus and future train service. Other regional bus service to the Park could be developed using resident employment data collected by RIEDC, in conjunction with on-site employers.

The initial design concept for the transit centers anticipates the operation of three shuttle bus routes within the site, serving:

- Quonset/Kiefer Park/Airport
- Executive Park/Commerce Park
- Davisville/Waterfront.

These routes would originate from transit centers in West Davisville and Executive Park. A fourth shuttle route could operate on Route 403 to West Davisville, and perhaps to the T.F. Green Airport and downtown Providence. Operation off-site on public roadways would be subject to Public Utilities Commission approvals with consideration of existing franchise rights.

RIEDC should consider establishing ridesharing and vanpooling policies as part of any development or lease agreement with prospective tenants/owners of properties in the Park before new buildings are opened. A tenants association and a local Transportation Management Association could plan and coordinate the commuting vanpool service. RIPTA could assist in this regional service.

RIPTA continually examines system-wide route structure, with the intent of updating a service network that traces its origins to the original streetcar network radiating from Providence. RIPTA services for Quonset Davisville could be expected to include fixed line haul routes operating on Route

1 and express services from park and ride facilities. The commuter survey conducted for this study in spring 2000 indicated that the greatest concentration of the current work force lives in the corridor between the Park and Providence.

Planning for a transit center envisions two-bus berths for standard 40-foot transit buses. Using a service rate of 10 buses per berth per hour, approximately 1,600 passengers could arrive or depart in a two-hour peak period, approximately 6 percent of the anticipated workforce.

#### **4.11 Transportation Management Association**

RIEDC and the major employers should establish a Transportation Management Association (TMA) at Quonset Davisville. The purpose of a TMA would be to identify and implement traffic mitigation measures of benefit to the Park. TMAs are successful throughout the country since they provide a formalized structure for private sector activities in transportation. These cooperative efforts could be initiated by RIEDC (perhaps as part of lease restrictions) and then turned over to the TMA, and could involve developers, employees and tenants. RIPTA could assist in planning this service. A commitment to a TMA is contained in the previously referenced Relocated Route 403 Project FEIS. RIDOT committed to working “with the employees at Quonset Point/Davisville to form a transportation management association and work...to develop new...initiatives.” A TMA might, for example, develop a joint business/employee bulletin board, for all businesses in the Park, that maintain records for all employees willing to ride-share or car pool, as well as those who need a ride. Flextime and staggered work hours also could be encouraged and would help even out peak traffic generation periods.

In comments dated September 4, 2001, the Rhode Island Department of Environmental Management (RIDEM) stated:

*“The Draft Final Master Plan 2001 (“the Plan”) appropriately places strong emphasis on the transportation element of site redevelopment, taking into consideration access via highway, rail, sea and air. The issue of minimizing vehicle miles traveled (VMT) is one of importance to RIDEM. The suggestion of forming a Transportation Management Association involving the RI Economic Development Corporation (RIEDC) and major employers at Quonset Davisville to implement traffic mitigation measures is excellent and should be pursued.”*

RIEDC may want to consider certain incentives for developers or tenants that reduce or maintain low (er) employee trip generation totals, especially during peak periods. Such incentives could include higher density development and lower parking space requirements.

#### **4.12 Quonset State Airport**

Existing Conditions and Operations: Quonset State Airport (the Airport) serves military and civilian aviation and is considered a “transport-category” airport. The Airport was also designed as a reliever airport. As shown on Exhibit 1, the Airport is located in the Town of North Kingstown, Rhode Island, on the west shore of Narragansett Bay, approximately 2.5 miles north of the Village of Wickford. The Airport occupies 754 acres according to the Federal Aviation Administration (FAA) Airport Master Record, all within the Quonset Davisville industrial park boundaries.

Fixed-base operators (FBOs) serve the Airport’s civilian aviation activity. In addition to civilian aviation, the Airport serves as the bases of operation for the 143<sup>rd</sup> Airlift Wing (AW) of the Rhode Island Air National Guard and the Rhode Island Army National Guard.

Role of Airport to Industrial Park: Aviation has made an enormous contribution to the economy of the region. Because Quonset State Airport has a runway length of 7,500 feet with instrument landing system (Runway 16/34), the Airport will continue to play an important role in the industrial park. In particular, the RIEDC believes that the Airport is an important asset for future industrial park development and expects that its use will be continued.

Airports offer particular cost advantages to some businesses that ship their products to distant markets. Air shipping can more quickly turn over inventory, resulting in realization of a quicker return on investment; and can reduce pilferage and warehousing costs, among other cost reductions. Among those industries in Rhode Island are garments and fabrics, electronics, pharmaceuticals, automotive and machinery parts, food and produce and various other manufactured products. These industries usually compete for regional, national or international markets. Airfreight can facilitate their need to efficiently deliver product to distant markets. While Quonset State Airport would be a benefit to the Park in developing new air cargo complexes, it is unlikely that commercial cargo carriers will choose to operate here. According to RIAC, commercial air cargo businesses operate successfully at T.F. Green Airport, which has additional capacity. Nevertheless, it may be convenient for some businesses at the Park to ship light cargo in small aircraft at Quonset.

#### **4.13 Summary of Transportation Plan Recommendations**

##### **Hierarchical Roadway System:**

- A hierarchical roadway system is proposed for the internal circulation system including arterials, collectors, and local streets.
- New roadways should be named following the classification system such that arterials and collectors are called “Roads” and local streets are called “Streets”.
- The integrity of the street classifications should be consistent with the Master Plan, regardless of the street names.

##### **Circulation System Arterials (“Roads”):**

- Rename Roger Williams Way to Quonset Road to reflect the area it serves, and to conform to the proposed roadway hierarchy.
- Maintain Davisville Road as a two lane roadway. Improve its curb appeal Davisville Road between Route 403 Interchange and the Davisville Piers area.
- Provide an improved connection between Davisville and Quonset Roads with a new road to be named Cross Park Road.

##### **Circulation System Collector Roads (“Roads”):**

- All collector roads are recommended to be two-lane roads with shoulders.
- Name the new collector road provided by the RIDOT-proposed diamond interchange between Devils Foot Road and the West Davisville district, at the Relocated Route 403 Project, West Davisville Road.
- Provide access between Post Road and Davisville Road and provide a new address for office uses through Executive Park Road within Executive Park.
- In North Davisville, funnel traffic between the Cross Park Road and two points along Davisville Road, and provide new accessibility for interior land parcels.
- The collector road in Commerce Park is constructed, as proposed in the 1998 Draft Master Plan, and connects to Cross Park Road on the east and Quonset Road on the southwest.

- Create a collector road loop in Quonset using three existing streets; Conway Avenue (the eastern half), the southern two-thirds of Airport Street and all of Eccleston Avenue. This connector road will intersect with both the new Cross Park Road and Quonset Road.
- Rename Circuit Drive and Burlingham Street as one roadway, *Circuit Road*, thereby forming a connector loop road south of Quonset Road.
- The feasibility of constructing a roadway from the Davisville Waterfront District to the underutilized parcel located on the eastern section of Quonset State Airport will be examined.

Note: Prior to any name changes to roads, streets and avenues, the RIEDC will work with the Town of North Kingstown in facilitating the proper response to the 911 address system and minimize as much as possible impacts to Park tenants.

#### Parking:

- RIEDC will work closely with business clients in adapting parking controls to specific development situations.

#### Route 403 Relocation Project:

- The Route 403 project, particularly the interchange with Route 1, Roger Williams Way (Quonset Road) and Davisville Road under construction, should be completed as soon as possible to relieve congestion at the intersection and on local streets due to growing commuter (and truck) traffic.

#### Multi-Modal and Transit Centers:

- To take advantage of rail and highway access that can serve multi-modal transportation-related industries, a freight multi-modal center is proposed for the park.
- A freight multi-modal center for transfers and a future commuter rail passenger transit center could be considered since access to West Davisville will be improved by both the Route 403 Relocation Project and the Freight Rail Improvement Project. The center would require approximately 15 acres for new railroad spurs and truck parking/load/unloading and should be convenient to access both the Northeast Railroad Corridor and the relocated Route 403 exit.
- A transit center may be located in Executive Park near the hotel/restaurants to provide for transfers between RIPTA's regional bus and Park shuttle bus services. The facility should include space for commuter vans, taxis, bicycles, and pedestrians. The facility should also include two-bus berths for standard 40-foot buses.

#### Transit:

- To attract riders, public transit service must meet schedule and origin/destination needs of employees, particularly those on shift schedules, and buses must be appropriately routed to travel through the towns and cities with the heaviest concentration of employees.
- A shuttle bus service should be considered within the Park to serve particular employment and activity nodes.
- RIEDC should consider establishing ridesharing and vanpooling policies as part of any development or lease agreement with prospective tenants/owners of properties in the Park before new buildings are opened.
- As Quonset Davisville develops to its full potential, a water transit service to the park may become feasible.

- Water transit service from East Bay, especially Newport, may become feasible as some passengers on corporate jets using Quonset State Airport have final destinations in the Newport area.
- Investigate water ferry service from Providence and Newport if a tourism site is developed at the Davisville Pier.
- The proposed extension of commuter rail service south of Providence along the Northeast Railroad Corridor should include a station at West Davisville. RIDOT should look at this possibility as part of its South Country Commuter Rail Study. Limited parking, bus, bicycle, and pedestrian facilities should be included in the station design. The station could be linked to the rest of the Park by a shuttle bus service.

#### **Bicycles and Pedestrians:**

- Encourage bicycle and pedestrian access by greatly improving accommodation of these two alternate transportation modes. The new system of roadways with paved shoulders and proposed bicycle and pedestrian paths should be encouraged.
- Bicycle accommodation along roads should include signs designating the roadway as a bicycle route. On-road bicycle routes may be designated using “wide curb lanes”, marked bicycle lanes, or on paved shoulders.
- Reaffirm the Base Reuse Plan’s proposed bikeways along the northern edge of the park, linking Calf Pasture Point and other recreational activities in the Davisville Waterfront with the proposed West Bay Bikeway along Post Road. The bike path would also connect to the Executive Park Transit Center, the planned hotel, and the Seabee Park.
- Bicycle routes should be designated along Cross Park Road and continue across Quonset Road (Roger Williams Way) into Kiefer Park along Circuit Road. Neighborhood access to Kiefer Park and a potential segment of the proposed West Bay Bicycle Path could also be provided at Camp Avenue.
- Encourage employers to provide additional bicycle facilities for their employees.
- Sidewalks and pedestrian accommodations should be provided along the roads, especially in Executive Park.
- Developers of manufacturing and office buildings should consider siting the entrances to buildings in such a manner so as to be convenient to public transportation passenger buses and inter-building pedestrian routes.

#### **Railroads:**

The existing railroad facilities:

- Can be used for future commuter rail with improvements;
- Provide rail access to numerous existing, used and vacant facilities;
- Can be reconfigured, while retaining the two main trunk lines, to accommodate new businesses and industries within the Park;
- Can be reconfigured at the Davisville piers to handle automobiles and break-bulk traffic;
- Provide site occupants with a means to leverage the cost of transportation among all modes so that their product cost remains competitive in U.S. or world markets; and
- Provide a direct outlet, via the Northeast Corridor, to rail markets in North America

## 5.0 Infrastructure

This chapter revises information regarding utilities presented in the 1998 Draft Master Plan. Please refer to Chapter 8.0, Utilities, in the 1998 Draft Master Plan for a detailed description and analyses of the utilities system as of November 1998. There is still sufficient capacity in the water supply and wastewater systems to serve the future development projected in this Master Plan, particularly since the projected employment in 2021 is about 8,000 less than that projected in the 1998 Draft Master Plan and about 3,000 less than the 2001 Master Plan. Gas, electric, fiber optic cables will have to be expanded to serve the Park as it continues to full build out. This Master Plan includes a capital improvement program in Chapter 7.0 “Implementation Plan.”

### 5.1 Water Supply System

The Quonset Davisville Port and Commerce Park water supply system is owned and operated by the RIEDC. The water supply system consists of 65 miles of water mains, three gravel-packed groundwater wells, two water storage tanks and three emergency cross-connections with the Town of North Kingstown and Kent County water supply systems. The water system serves approximately 100 commercial and industrial accounts.

Since 1998, the following improvements to the water supply system have been made:

- RIEDC rebuilt three gravel packed groundwater wells and installed new pumping equipment in 1999 and 2000. The calculated field testing results indicated that they meet original design capacities.
- The Water Supply System Management Plan prepared by RIEDC has been approved.
- RIDOT is updating water system components that are affected by construction of the Relocated Route 403 Project, which began in spring 2001.
- RIEDC constructed a 16-inch diameter, 4,000 feet long water main loop in Commerce Park. In addition, a 12-inch diameter main from West Davisville to the intersection of Post and Newcomb Roads is being replaced by a 16-inch diameter water main.
- RIEDC recently upgraded and completed an interconnection with the Kent County Water Authority in 1999.
- RIEDC has recently installed an emergency generator at wells 9 and 14A.

RIEDC is a long-term member of the Hunt Wellhead Area Protection Committee, which includes the Towns of North Kingstown and East Greenwich, the City of Warwick and the Kent County Water Authority. The purpose of the Committee is to protect the Hunt Aquifer, as it is an important water supply source for the area. Water conservation is a main priority of this Committee and RIEDC.

The RIEDC promotes practical water conservation through a Major Users Technical Assistance Program tailored to each major user. This process starts with new users during initial site development reviews so that conservation measures can be integrated into the users’ initial construction. The RIEDC has also been an active participant in the development of a Drought Management Plan by the RI Water Resources Board, which will serve as a future guide to water

suppliers, municipalities, state agencies and consumers throughout the state including the proposed park.

In the 1998 Draft Master Plan, the approximate average daily water demand was computed for 900 acres of developable available land, 1.13 million gallons a day (MGD.) In addition, the RIEDC has a contractual obligation to provide water to Toray Industries up to 1-MGD (existing: 0.22 MGD plus future 0.78 MGD). In the 1998 Draft Master Plan, the average daily demand was estimated at 2.496 MGD with a maximum peak day estimated to be 3.745 MGD. Now in 2003, there is less land available for future development (678 acres) compared to 900 acres available in 1998, as well as 5,000 fewer employees projected than in 1998. This reduces the estimated average daily use by approximately 100,000 gallons per day and the maximum by 150,000 gallons per day. This represents a significant reduction (almost 40 percent) in the daily withdrawal by the Navy prior to closings of the Quonset and Davisville bases. The average daily demand can be met by any two of the three existing wells (operating well within an 80 percent availability), holding the third in reserve. The maximum peak day is well within the available pumping capacity of 4.60 MGD of the three existing wells. All of these operating parameters are consistent with the U.S. Geological Survey (USGS) estimated safe yield of the Hunt Aquifer of 8 MGD. Therefore, it is logical to conclude that with reasonable cooperation and conservation measures by all the users in the management of the Hunt Aquifer, there is sufficient water supply capacity available to serve the proposed development at the Park.

## **5.2 Wastewater System**

Quonset Davisville is served by a gravity wastewater collection system consisting of approximately 20 miles of pipes ranging in diameter from 4 to 24 inches. The system is composed of sewer lateral and trunk lines generally following natural ground contours. Wastewater is discharged from individual buildings into sewer lines via service connections. Lateral and trunk lines are equipped with manholes at regular intervals to allow inspection and cleaning. Wastewater flows by gravity in a southerly direction toward the Wastewater Treatment Facility (WWTF) located on Zarbo Avenue.

Because of topographic constraints, two pumping stations are included in the Quonset Davisville collection system. The Davisville Pumping Station, designated as DS-55, is located at the south end of the golf course, and the Pier Area Pumping Station is located near Davisville Pier 2. These stations lift wastewater from low points in the system to an elevation where wastewater can flow by gravity to the WWTF. The Quonset Davisville sewer system is a separate system from the stormwater collection system.

The following improvements were made to the wastewater system since 1998:

- RIEDC upgraded the Davisville Pumping Station in 2001. Two new 1,200 GPM pumps with variable speed controllers were installed along with an upgraded electrical system. The two new pumps can be upgraded further to 1,800 GPM each with a change of motors and impellers.
- Infiltration and inflow currently is being addressed in the Quonset areas by:
  1. sealing sewer manholes in the areas influenced by groundwater and tides;
  2. installing waterproof manhole covers in flood zones;
  3. Lining approximately 10,500 linear feet of sewer mains identified by video inspection as being in poor structural condition and with a considerable amount of infiltration along Airport Street, Zarbo Avenue, Quonset Road and McNaught Street.
  4. Replacing seriously deteriorated collection systems in Commerce Park and the former Davisville Construction Battalion area with new and extending sanitary service to the

easterly portion of the Commerce Park area which was formerly serviced by septic systems and cesspools.

- RIEDC completed extending sanitary sewer service to the West Davisville development area. This is significant because the westerly half of that area sits over a portion of the recharge area for the Hunt Aquifer, reducing the potential for the discharge of pollutants into the groundwater.
- RIEDC has continued to receive excellent ratings from regulators in the operation of its Wastewater Treatment Facility and the effective management of its approved Pretreatment Program which regulates and reduces the discharge of pollutants into the wastewater collection system and ultimately to the receiving waters of Narragansett Bay. The Pretreatment Program for the Park is described in RIEDC's *Sewer Treatment System Regulations, 2000*, which is part of the Development Package. Pretreatment applies to such pollutants as oils that are separated by gravity via a pretreatment program prior to discharge to the collection system. In addition, the RIEDC regulations prohibit sludge or deposited solids resulting from the Pretreatment Program to be discharged via the collection system. The RIEDC Pretreatment Program complies with effluent standards under section 307 (c) of the Federal Water Pollution Control Act, which also applies to new sources of discharges of pollutants.

The 1998 Draft Master Plan indicated that there was sufficient capacity to serve the wastewater collection needs of the industrial park with 5,000 more employees on site than now projected. Therefore, it is concluded that the Park's Wastewater Treatment Facility is capable of serving the future needs of the Park as now projected without significant detrimental impact to receiving waters.

### 5.3 Stormwater Management

Stormwater runoff can be responsible for transporting eroded sediments, nutrients, and other non-point source pollutants into receiving waters. Although the Navy had large system(s) of stormwater infrastructure throughout both the Quonset and Davisville bases, it lacked any significant measures to control non-point source pollutants. To improve that situation, as each area of the facility is redeveloped, a Stormwater Management Plan specific to that area is used to identify best management practices (BMPs) which provide protection and restoration of the various receiving waters around the facility by reducing pollutant loading from changes in land use in order to protect surrounding natural resources, such as freshwater wetlands and marine ecosystems.

The development of the Park is expected to result in land use changes that improve environmental conditions. The areas converted to new commercial and industrial uses will result in conversion of some impervious areas (e.g., roadways, parking lots and rooftops) to areas of open space and grassy swales. These land use changes will reduce the volume and intensity of stormwater runoff. An agreement called "Freshwater Wetlands in the Vicinity of the Coast" between the Rhode Island Coastal Resource Management Council (CRMC) and the Rhode Island Department of Environmental Management (RIDEM.) governs stormwater management in the State. Both agencies have identified on maps, which parts of the Park are under their jurisdiction. Prior to undertaking any significant site development changes, RIEDC will meet with the pertinent agency to establish the existing stormwater runoff characteristics. This will permit RIEDC to establish post development conditions and clearly establish the net reduction in stormwater runoff as a result of any site modifications.

Each new site and roadway will incorporate structural devices that temporarily detain and treat stormwater runoff to control peak discharge rates and reduce pollutant loading. Among those receiving waters expected to see reduced impacts are Narragansett Bay (in the Quonset and Davisville Pier areas); brackish wetlands and red maple swamp in the Kiefer Park area; Halls Creek, Davol and

Frye Ponds (in Commerce Park and North Davisville); Allen Harbor (in North Davisville); Mill Creek and Wickford Harbor (in Commerce and Executive Parks); and, Sand Hill Brook (in West Davisville).

## **5.4 Steam Plant**

The 1998 Draft Master Plan includes a detailed description of the thermal distribution system and the steam plant. It also includes a description of the future possibilities of increasing the market for steam use in the Park and the feasibility of a cogeneration system. The discussion concluded that both were limited. Since then, due to financial reasons, the RIEDC has decided to close the steam plant in April 2002.

## **5.5 Electrical Distribution System**

Electrical power currently is presently provided to the entire complex through two 115 kilovolts (kV) main transmission lines. Power is distributed throughout the Quonset Davisville by multiple 33 kV loops and delivered to tenants at primary voltages of 33 kV and 12.4 kV. Overall demand at the Park exceeds 10 Mw with Electric Boat and Toray the largest users.

Reducing the cost of electric power to existing and future tenants of Quonset Davisville needs to be a major priority of RIEDC. The high cost of electricity in Rhode Island is a major disincentive to prospective tenants of Quonset Davisville. One option that is available to RIEDC is the restoration and reuse of the existing steam turbine generators at the heating plant. These turbine generators are rated at 3,570 KVA each and could be used in lieu of the pressure reducing valves to reduce the steam pressure to the steam distribution system.

## **5.6 Fiber Optic Cables**

Recently, Cox Communications installed hybrid fiber coaxial cables in Kiefer Park and plans to expand the lines in 2002 to Quonset, Commerce Park and Executive Park. Further expansion will depend on customer demand. These cables now provide data, digital video, high speed Internet connections, and digital phone to customers within the Park. These new telecommunication services will position Quonset Davisville Port and Commerce Park as a fully equipped industrial park ready to serve high technology industries. Industrial parks wired for bandwidth to accommodate high-speed transmission of voice, data and video signals are prerequisites for attracting high technology businesses. The telecommunications infrastructure to support such industries may be a combination of fiber optics, coaxial cable, enhanced copper wire and wireless technology.

## **5.7 Gas Distribution System**

The New England Gas Company provides gas service to the Park. Service to the Park is through a 16-inch, 90-psi line. A high-pressure gas line is in the Park and has been extended into Commerce Park. The Company recently upgraded parts of the distribution system. New England Gas will assess the projections of future growth at Quonset Davisville Port and Commerce Park in order to determine how to best meet the future demand for gas.

## **5.8 Eco-Industrial Park**

Establishment of an eco-industrial park at Quonset Davisville Port and Commerce Park will require the State of Rhode Island, the Towns of North Kingstown and possibly Jamestown as well as

synergistic industries to effectively work together. Government needs to develop policies that encourage and support innovative and sustainable development and encourage industries to remain in areas suitable for industrial development. Communities need to demand that industrial neighbors maintain clean work environments. Industries must realize the need to protect the environment and the resources upon which they depend. All three must cooperate or the effort will fail to meet the twin goals of environmental protection and business profitability.

Industrial ecology was defined in 1989 by two General Motors engineers as a process that seeks to improve and protect the natural environment simultaneously while achieving business profitability mainly as applied to the manufacturing sector. Essentially, the process involves one industry using waste products from another industry in its manufacturing process. Examples include:

1. an oil refinery that supplies surplus gas, cooling water, cleaned waste water and sulfur removed from emissions while receiving process steam;
2. a pharmaceutical plant that supplies sludge and sludge fertilizer supplement for farmland and receives process steam; and
3. a coal-fired power plant that supplies process steam, fly ash and gypsum and receives surplus gas, cooling water, cleaned wastewater. Other byproducts could be hot water for greenhouses, hot water for municipal uses and heated water for fish tanks.

Already, Quonset Davisville is achieving eco-industrialism in that contaminated areas or “brownfields” are being reclaimed for industrial development in an industrial area with established transportation and labor networks. The promise of an eco-industrial park at this site is that the environmental impacts of the new industries to be developed will have less adverse impacts than the uses that preceded it.

RIEDC should consider establishing an eco-industrial park task force made up of appropriate State government officials, community representatives and potential candidate industry sectors whose main function would be to determine the potential for establishment of an eco-industrial process at Quonset Davisville. The types of industries that are heavy users of natural resources that may be ideal for an eco-industrial park, however, may not be appropriate for siting at Quonset Davisville. While only 40 such parks exist in the world, five in the U.S. had the backing of the President’s Council on Sustainable Development.

## **5.9 Town of North Kingstown**

The Town of North Kingstown is the host community for Quonset Davisville Port and Commerce Park. It receives financial revenues from property tax collected from private landowners in the Park. In addition, the Town receives payment in lieu of taxes (PILOT) from companies that lease properties in the Park.

The remaining 678 acres of developable land in the Park represent a rare and significant resource for the entire State of Rhode Island, as affirmed by the State Industrial Land Use Plan by the Statewide Planning Program. Therefore, future Town facilities should be located on existing Town-owned lands as much as practical. Prime industrial development lands in the Park should be preserved for that purpose.

Nevertheless, other Town facilities may be located in the Park in the future, and these have been specifically identified in this Master Plan. The plan recommends a new fire station be located in the Park. Clearly, such an emergency facility should be located strategically to be able to quickly access the circulation system and to reach potentially vulnerable sites to fire and explosion (e.g., the Airport,

Toray Plastics Plant, the Wastewater Treatment Plant, Electric Boat, etc.). These sites are concentrated in the Quonset and Quonset Waterfront districts. A location with access to both Quonset Road (Roger Williams Way) and Cross Park Road with quick connections to Davisville appears to be a candidate to consider.

New athletic fields could also be located in the park. These fields could serve North Kingstown residents and provide a usable buffer area between industrial activities and residential areas.

Because of the above relationships between the Town and the Park, the Town and RIEDC need to continue to work together cooperatively in areas of mutual interest regarding public facilities. Such areas include the following:

- Adoption of the 2003 Master Plan as part of the North Kingstown Comprehensive Plan;
- The planning for future public services in the Park, including emergency response systems and a fire station location;
- The sharing of responsibilities for maintenance of public facilities, including new infrastructure;
- Town investment in public infrastructure through its Capital Improvement Program; and
- Opportunistic partnerships between Park businesses and educational institutions to expand the benefits of the industrial Park to the larger community.

These are implementation issues that require specific objectives, practical evaluations and realistic discussions between the Town and RIEDC, and affected parties. These issues will be addressed in detail in the Implementation Program to be developed after adoption of the Master Plan.

## 6.0 Development Program

This chapter describes the proposed development program for Quonset Davisville Port and Commerce Park over a 20-year period. The program is based on the current market analysis performed for the 2001 Master Plan. It describes the density of development and employment, a reasonable forecast of land absorption and resulting employment distribution. It concludes with a phased development strategy linked to the timing of supporting infrastructure becoming available. The proposed development focuses on the remaining 678 acres of developable land.

### 6.1 Development Program

The development program described in this chapter is based on the analysis presented in the Technical Support Document 1, *“Market Analysis for Quonset Davisville Port and Commerce Park”* prepared by Bonz/REA, Inc., June 20, 2001 for this Master Plan revision. (It is included in the Technical Support Documents, bound separately.) In general, Quonset Davisville and other industrial parks in the region have attracted a mix of large- and small-scale users engaged in manufacturing, warehouse/distribution, and office and research and development activities. These general profiles are likely to continue over the assumed 20-year absorption and development period.

As the various planned highway, railroad and infrastructure improvements proceed, the Park will gain particular strength in attracting distribution-related industries. Consequently, large-scale distribution facilities (requiring 50 or more acres) at the Park could comprise a major component – up to 40 or 50 percent – of total development. This is demonstrated by Ocean State Jobbers, which has recently acquired over 50 acres in Commerce Park for a distribution and office facility. At the same time, office and high technology research and development activities will comprise a larger component than the existing parks in Rhode Island, which serve primarily as manufacturing and distribution centers. Some of these users – as well as manufacturing tenants – are likely to require railroad connections, and are likely to occupy sites of 25 acres or more. In addition, office/research and development (R&D) space is likely to be evident at the site, and an estimated 160 acres of such land could be absorbed over the next 20 years.

In order to accommodate the mix of industries and businesses attracted to the Park over the next 20 years, the parcel plan for each of the industrial districts should be flexible. The parcel plan should offer a mix of large sites between 25 and 100 acres, as well as smaller or “standard” sites between 2 and 10 acres. Large sites will increasingly be in demand as the off-site and on-site rail and road improvements approach completion. Opportunities to attract large site users are less predictable than small site-using tenants; however, up to 325 to 350 acres – roughly 45 to 50 percent of the total area - - of large site-using tenants could be attracted to the Park over the 20-year development period. Many of those sites will require rail access; land offering convenient rail connections should be reserved for such users.

Higher quality industrial parks in the region provide a range of commercial and service facilities for their tenants. Many provide sites for convenience retail, restaurants, and compatible uses including banking, health/fitness centers, delivery services, daycare and other such services. Appropriate locations for these services include sites near the Park entrance and sites near recreational amenities; locations close to heavy trucking and heavy industrial activities should be avoided. Some of these uses could be located on the ground floor of office buildings or integrated into a multi use development; a strip commercial plaza should be avoided.

## 6.2 Density and Employment

Over the next 20 years, Quonset Davisville development could generate approximately 11,900 jobs (based on the availability of 678 acres of developable land). In forecasting maximum likely employment, Bonz/REA Inc. has applied employment density ratios derived from established industry standards, parking studies, performances at Quonset Davisville and other industrial parks, considerations of likely tenant types, and Bonz/REA experience. Key considerations include the following three factors:

*Maximum Likely Floor Area Ratio (FAR)*: While new buildings may occupy up to 50 percent of the land area,<sup>2</sup> most tenants would not occupy more than 25 to 35 percent of their land area. In comparable business parks, the Devens Commercial Center targets an overall FAR of 22 percent; existing tenants at Quonset Davisville maintain FARs ranging from 5 percent to 39 percent.

*Employment per Square Feet of Building Area (s.f.)*: The second factor in projecting maximum employment involves the ratio of employees to building area. The Urban Land Institute maintains the following benchmarks:

<i>Use</i>	<i>s.f. of floor space/Employee</i>
Industrial (Manufacturing, Warehouse, and Distribution)	500
Office	333
Retail	400

These benchmark ratios vary: office space ratios vary to as low as 200 square feet per employee, and industrial space ratios range widely depending on factors such as the number of shifts per day, the extent to which operations are automated, the nature of operations (distribution, manufacturing), the type of products involved (small precision parts, large-scale raw materials processing), and the extent to which outdoor areas are used. Overall, based on consideration of these factors and our analyses of employee/space ratios at Quonset Davisville (based on a sample of recent construction projects) and nearby business parks such as Devens (MA) and Pease (NH), the analysis applies the following (lower-density) ratios:

<i>Use</i>	<i>s.f. of floor space/Employee</i>
Manufacturing	800
Distribution	1,250
Light Industrial	800
Mixed Community	400
Water-Dependent Industries	1,250
Water-Enhanced Industries	800
Tourism and Recreation	400

*Density Increase over Time*: A third factor in the analysis accounts for the pattern wherein new business park tenants seek space to accommodate future growth. Businesses seeking new space are generally growing and, therefore seeking larger and/or higher quality space. Thus, new business park tenants typically (1) acquire enough land to accommodate more buildings than currently required and (2) initially build structures large enough to accommodate additional employees. This is very likely the case at Quonset Davisville, where many recently constructed buildings have occupied only 5 to 15

<sup>2</sup> As per Quonset Davisville Development Package, maximum building area would occupy 40 percent of the land area on sites smaller than 3 acres.

percent of their sites. As these businesses expand, they will increase their development (and employment) densities.

Overall, based on the preceding considerations, this analysis applies maximum FAR ratios of 25 to 35 percent (at build-out). These are “maximum likely” FARs presented for planning purposes; actual FARs may fall within a range as low as 20 to 25 percent.

Applying these factors, maximum total employment at Quonset Davisville would amount up to 11,900 jobs on the 678 acres of remaining developable land. This would amount to an employment density of 17 workers per acre. In the first ten years of operations, employment densities may be considerably lower (by as much as 50 percent), but in planning for the site’s ultimate long-range operating capacity, these figures shown in Table 6.1 present reasonable projections of employment and employment densities for the two development scenarios presented in the land use chapter. Table 6.2 shows the possible future employment and acreage distribution in the seven development districts of the Park at full build-out in 2021.

### **6.3 Absorption**

The following forecast of likely absorption at Quonset Davisville is based on the following analyses of:

- State and local labor force trends;
- State and local industry growth opportunities;
- Absorption rates at competitive business parks in Rhode Island and southeastern Massachusetts;
- Recent development and absorption at the site;
- The site’s current and future competitive advantages and disadvantages;
- The impacts of various anticipated improvements; and
- Potential niches for various types of business park users.

Considering the findings of these analyses, a reasonable land absorption forecast is as presented in Table 6.2. As shown, the forecast anticipates that over the next five years, absorption would proceed at rates roughly equivalent to the site’s recent performance, about 15 to 25 acres annually. Land prices will increase from current levels as QD improvements proceed.

In the ensuing five-year period (2006 to 2010), absorption may accelerate. As land grows increasingly scarce at other parks in Rhode Island, Quonset Davisville will continue to strengthen its market position as (1) the only rail-accessible business park and (2) the highest quality, flat-terrain park in the State of Rhode Island. During this period, absorption rates likely will increase as the site benefits from its improved access, improved environment, and increasing visibility as a major business park for upscale businesses as well as industrial users requiring large land tracts and/or rail and sea shipping modes. Average annual absorption of 20 to 30 acres per years is feasible and will approximate the recent performance levels of major industrial parks occupying strategic locations in southeastern Massachusetts. Land prices are expected to increase and approach the price levels currently achieved in southeastern Massachusetts.

Quonset Davisville absorption by this time will be further augmented by ongoing growth among Quonset Davisville’s established tenant base. Growth among these tenants will compel them to seek new land to accommodate such growth. In addition, the growing tenant base will attract related businesses seeking opportunities to provide supplies and services to the various tenants in this growing industrial location. The Park will also face challenges in replacing departing tenants and

copied with varying economic conditions. Overall, however, these challenges would be outweighed by growth among its established base of thriving companies. During the second decade of the 21<sup>st</sup> century, the Park should be able to achieve absorption rates in excess of 30 acres per year, during which time many of the districts within the Park will achieve full build-out.

**Table 6-1. Projections of employment and employment densities at the Park based on two development scenarios within the Davisville Waterfront District.**

<b>Scenario 1 - Water-dependent and water-enhanced activities in Davisville</b>						
<b>Land Use</b>	<b>Acreage</b>		<b>Max. Likely FAR</b>	<b>s.f. bldg area / employee</b>	<b>Employment</b>	<b>Employment/acre</b>
	<b>Number</b>	<b>% of Total</b>				
<b>General Industrial</b>	163	24.0%				
Manufacturing	127	18.7%	50.0%	800	3,539	27
Distribution	36	5.3%	35.0%	1,250	402	12
<b>Light Industrial</b>	46	6.8%	35.0%	800	877	19
<b>Mixed use development</b>	75	11.1%	25.0%	400	2,042	27
<b>Waterfront</b>	214	31.6%				
Water-dependent industries	49	7.2%	30.0%	1,250	512	10
Water-related activities	165	24.3%	30.0%	800	4,288	19
<b>Airport</b>	120	17.7%			120	1
<b>Totals/Averages</b>	678	100.0%			11,780	17
<b>Scenario 2 - Water-dependent and Tourism Activities in Davisville</b>						
<b>Land Use</b>	<b>Acreage</b>		<b>Max. Likely FAR</b>	<b>s.f. bldg area / employee</b>	<b>Employment</b>	<b>Employment/acre</b>
	<b>Number</b>	<b>% of Total</b>				
<b>General Industrial</b>	163	24.0%				
Manufacturing	127	18.7%	50.0%	800	3,539	27
Distribution	36	5.3%	35.0%	1,250	402	12
<b>Light Industrial</b>	46	6.8%	35.0%	800	877	19
<b>Mixed use development</b>	75	11.1%	25.0%	400	2,042	27
<b>Waterfront</b>	274	40.4%				
Water-dependent industries	49	7.2%	30.0%	1,250	512	10
Water-related activities	225	33.2%	30.0%	800	3,144	19
<b>Tourism and Recreation</b>	60	8.8%	20.0%	400	1,307	22
<b>Airport</b>	120	17.7%			120	1
<b>Totals/Averages</b>	678	100.0%			11,944	18

**Table 6-2. Possible future employment and acreage distribution at the Park by district based on two development scenarios within the Davisville Waterfront District.**

Scenario 1 - Water-dependent and water-enhanced activities in Davisville									
District Name	General Industrial		Light Industrial	Mixed Community	Waterfront		Tourism and Recreation	Airport	Totals
	Manufacturing	Distribution			Water-dependent	Water-related			
<b>Executive Park</b>									
Employment	0	0	0	2,042	0	0	0	0	2,042
Acres	0	0	0	75	0	0	0	0	75
<b>West Davisville</b>									
Employment	898	402	0	0	0	0	0	0	1,301
Acres	33	33	0	0	0	0	0	0	66
<b>North Davisville</b>									
Employment	0	0	381	0	0	3,144	0	0	2,526
Acres	0	0	20	0	0	165	0	0	185
<b>Kiefer Park</b>									
Employment	0	0	495	0	0	0	0	0	495
Acres	0	0	26	0	0	0	0	0	26
<b>Commerce Park</b>									
Employment	2,314	0	0	0	0	0	0	0	2,314
Acres	85	0	0	0	0	0	0	0	85
<b>Quonset Park &amp; Waterfront</b>									
Employment	327	0	0	0	0	0	0	0	327
Acres	12	0	0	0	0	0	0	0	12
<b>Davisville Waterfront</b>									
Employment	0	0	0	0	512	1,143	0	0	1,656
Acres	0	0	0	0	49	60	0	0	109
<b>Airport</b>									
Employment	0	0	0	0	0	0	0	120	120
Acres	0	0	0	0	0	0	0	120	120
<b>Totals</b>									
Employment	3,539	402	877	2,042	512	4,288	0	120	11,780
Acres	130	33	46	75	49	225	0	120	678

Table 6-2, continued.

Scenario 2 - Water-dependent and Tourism Activities in Davisville									
District Name	General Industrial		Light Industrial	Mixed Community	Waterfront		Tourism and Recreation	Airport	Totals
	Manufacturing	Distribution			Water-dependent	Water-related			
<b>Executive Park</b>									
Employment	0	0	0	2,042	0	0	0	0	2,042
Acres	0	0	0	75	0	0		0	75
<b>West Davisville</b>									
Employment	898	402	0	0	0	0	0	0	1,301
Acres	33	33	0	0	0	0	0	0	66
<b>North Davisville</b>									
Employment	0	0	381	0	0	3,144	0	0	3,526
Acres	0	0	20	0	0	165	0	0	185
<b>Kiefer Park</b>									
Employment	0	0	495	0	0	0	0	0	495
Acres	0	0	26	0	0	0	0	0	26
<b>Commerce Park</b>									
Employment	2,314	0	0	0	0	0	0	0	2,314
Acres	85	0	0	0	0	0	0	0	85
<b>Quonset Park &amp; Waterfront</b>									
Employment	327	0	0	0	0	0	0	0	327
Acres	12	0	0	0	0	0	0	0	12
<b>Davisville Waterfront</b>									
Employment	0	0	0	0	512	0	1,307	0	1,819
Acres	0	0	0	0	49	0	60	0	109
<b>Airport</b>									
Employment	0	0	0	0	0	0	0	120	120
Acres	0	0	0	0	0	0	0	120	120
<b>Totals</b>									
Employment	3,539	402	877	2,042	512	3,144	1,307	120	11,944
Acres	130	33	46	75	49	165	60	120	678

Table 6.3 provides a specific absorption scenario, consistent with the preceding forecast. This scenario, it should be noted, is provided for general guidance: the scenario is contingent upon the completion of the planned highway, railroad, seaport and other improvements, as well as the continued availability of air cargo services at T.F. Green Airport. In addition, the forecast does not allocate significant land for special uses such as publicly sponsored research institutions, large-scale aquaculture uses, or the proposed Air, Land & Sea Heritage and Technology Park. Overall, while Table 6.3 presents a reasonable and supportable forecast, it is illustrative only; plans should incorporate flexibility to accommodate shifting business cycles, the impacts of major tenants, public policy changes, and constantly changing market conditions.

**Table 6-3. Projected Absorption for the Park, 2003-2021.**

<b>Years</b>		<b>1-5</b>	<b>6-10</b>	<b>11-15</b>	<b>16-25</b>
<b>Average Annual Acreage</b>	<b>Low</b>	15	20	25	30
	<b>High</b>	25	30	35	40
<b>Average Land Price/acre*</b>					
	<b>Low</b>	\$175,000	\$185,000	\$200,000	\$200,000
	<b>High</b>	\$225,000	\$200,000	\$275,000	\$275,000

\* 2003 Dollars

## 6.4 Development Phasing

A phased development program for the remaining 678 acres of land at Quonset Davisville is recommended, based on the land absorption forecast and the expected distribution of development and employees in the seven districts of the Park. The phasing strategy is based on completing development of the districts first that already have supporting infrastructure. Other districts can be developed later, as new infrastructure becomes available including on-site utilities and the Relocated Route 403 and Freight Rail Improvement Projects. The recommended phased development program is described below, highlighting the needed major infrastructure elements.

### Years 1-5

The districts already served by utilities, railroads and roadways should be built out during Years 1-5. These include Quonset, the Quonset Waterfront and Kiefer Park. Parts of Executive Park near Post Road and Commerce Park near Davisville Road also could be developed during this period. The bike path along the north edge of Executive Park and the west and north edges of North Davisville should be constructed. Large parcels in north Commerce Park should be reserved for large site users, such as distribution industries. Ocean State Jobbers recently acquired a parcel over 40 acres in Commerce Park for a distribution and office facility.

### Years 6-10

As the FRIP is completed in 2003 and Phase 1 of the Route 403 Project is completed in 2006, development in West Davisville should continue and the remainder of both Executive Park and Commerce Park should be built out. It is assumed that Quonset, Quonset Waterfront and Kiefer Park would either be built out or nearing build-out during this period.

### Years 11-15

During Years 6-10 the Davisville Waterfront and North Davisville should be started and completed in the years 11-15. West Davisville should be fully built out during this period, as Phase 2 of the Relocated Route 403 Project is completed, as anticipated. In addition, the proposed commuter rail station and freight intermodal center should be developed, as appropriate, in West Davisville.

### Years 16-20

During Years 16-20, the Park should become fully built out during this period, as existing industries expand in their parcels or in other parcels, and as new industries occupy the remaining parcels.

## **7.0 Implementation Program**

The 2003 Master Plan includes an Implementation Plan based on the implementation issues outlined in the 2001 Master Plan under the Development Program. The following are steps taken by RIEDC, QDMC and the Town of North Kingstown in their efforts to put the Master Plan into practice.

### **7.1 Development Program**

The basis of the Implementation Program is the market-based Development Program described in Chapter 6.0. The purpose is to facilitate an orderly development of the industrial districts. It allocates acreage of varied land uses that are supported by current and anticipated market conditions over a 20-year period. The annual land absorption projected will be used to calculate an estimate of the revenues that RIEDC can expect from land sales and leases. The total of these revenues will indicate the potential need for additional financing mechanisms to fund the required infrastructure to support this development program.

### **7.2 Marketing Program**

The Marketing Program will be based on the Master Plan recommendations that QDMC/RIEDC should attract industries that can make use of its multi modal characteristics, especially railroad and marine facilities and those that require large parcels. These are among the Park's unique and strongest assets in the regional marketplace. In addition, the current marketing program will be evaluated.

### **7.3 Land Use Controls and Environmental Reviews**

Land use controls and environmental reviews will work in coordination with the Master Plan in achieving goals. RIEDC has a technical, environmental and design review process that will continue to be used for all new development and redevelopment projects within the Park.

During the revision process for the 2003 Master Plan, the development of new zoning for Quonset Davisville will be a way to implement the vision of the Park, such as a waterfront zone, industrial zone and an overlay district for the entire park area. RIEDC will work with the Town of North Kingstown in developing these zones.

A Quonset Davisville Overlay District will be proposed to the Town to adopt in their zoning ordinances. An overlay zone is placed over existing zoning districts, adding requirements, incentives or other special circumstances to the areas that fall within its boundaries in addition to the requirements of the underlying districts. The Quonset Davisville Overlay District will be used as a tool to accomplish the goals and objectives outlined in the Master Plan, allowing RIEDC and the Town the ability to meet the unique growth and development issues of the Park. Within the language of the overlay district, the Master Plan will be referenced as a guiding document. Site plan review will be based on the vision established and projects will be reviewed based on their ability to fit within that vision. The overlay district will also site other necessary requirements to be met such as those outlined in RIEDC's technical, environmental and design review process.

Within the Quonset Davisville Overlay District, the Park is further divided into sub-districts based on the land use plan of Chapter 3:

- Airport

- General Industrial
- Light Industrial
- Mixed Use Development
- Waterfront
- Open Space and Conservation
- Public and Recreation

Based on the discussion in Chapter 3.2 “Overall Land Use Concept,” specific requirements for each sub-district will be outlined to guide developers in meeting the vision of the Master Plan. For example, multi-use buildings that maintain the scale of the surrounding area will be encouraged in the mixed use development district to discourage the building of strip commercial structures. RIEDC will work closely with the Town in developing specific requirements.

## 7.4 Capital Improvement Program

The development of the Park requires significant public investment in infrastructure to stimulate private investment. The 2003 Master Plan Implementation Program includes a detailed capital improvement program (CIP) for roadway, railroad, utilities and associated site facility infrastructure development. The 2003 CIP for RIEDC includes the following items:

- **Building Demolition:** Numerous deteriorated former Navy buildings are proposed for demolition to enable the assemblage of marketable parcels of land totaling 140 acres. These parcels will be used for manufacturing, warehousing, distribution, laydown areas, office developments and improved aesthetics. These buildings are in severe state of deterioration and present fire and life safety and environmental danger. The elimination of these buildings will greatly enhance the curb appeal of the Park and provide momentum to the development effort.
- **Construct New Internal Roadways:** Twelve thousand linear feet of internal roadways and realigned utilities will be constructed within the Park. Additionally, 12,000 linear feet of Davisville Road will be reconstructed to create an attractive boulevard that will act as the gateway to the waterfront district. The work under this project will include new roadway pavement, utility systems, landscaping and signage.
- **Reconstruct Existing Roadways:** Rehabilitation and overlay will be done to 24,000 linear feet of existing roadways in the Park.
- **Utility Service Improvements and Extensions:** Abandoned Navy overhead utility lines will be removed and underground utilities such as electric and telephone along Davisville Road will be installed.
- **Internal Rail Upgrades:** Within the Park, 36,000 linear feet of the main line track from West Davisville to the Quonset and Davisville waterfronts will be reconstructed. Additionally, 27,000 linear feet of unneeded siding track will be removed in the Davisville waterfront area.
- **Davisville Bulkhead Replacement South of Pier 1:** The existing 1,000 linear feet of wooden bulkhead had deteriorated to such a state that it cannot be safely used for marine activity. Additionally, existing voids in the bulkhead are releasing upland materials into former berthing areas, diminishing water depth and developable land in the Park. The project will stop erosion and protect the waterfront area. Some 50 acres will be made available to support marine trade activities in the Davisville Waterfront District.
- **Bike Paths:** Seven miles of bike path will be constructed from Post Road to Calf Pasture Point.
- **Site Development Projects:** These projects include the construction of a new fire station and new athletic fields to serve as a shared community/park amenity within the Park.

- **Esplanade Construction:** A 3,100-foot esplanade will be constructed along the Davisville waterfront south of the piers. This project will create an amenity to enhance the waterfront area for development into a high-class marina in concert with a large marine trades component.
- **Miscellaneous Infrastructure Improvements:** These projects include repairs to existing structures such as roofs, HVAC and sprinkler systems as well as maintenance to existing infrastructure.
- **Airport Redevelopment Plan:** This project includes activities that will have a profound impact on the development of the Quonset State Airport. Abandoned dilapidated structures at the airport will be demolished, removing dangerous structures and improving curb appeal of the airport. Demolition will also make room for development along the main runway as well as the Quonset waterfront. The construction of a roadway to access the northern section of the airport property will open up 120 acres for future development. This project also includes the repair of 7,500 feet of the bulkhead surrounding the north and east side of the airport as well as the southeast bulkhead along Zarbo Avenue.
- **Port Security:** The RIEDC will be undertaking a project to enhance security at the Port of Davisville. The project will include improvements to isolate, secure and provide surveillance to the Port area. These improvements are necessary to meet the challenges of the post-9/11/01 era.
- **Utility Service:** The RIEDC will be undertaking a project to analyze the terrorist threat to the fresh water supply and wastewater collection and treatment system. Necessary improvements will be made to minimize the potential of such threat.

## 8.0 Sources

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